

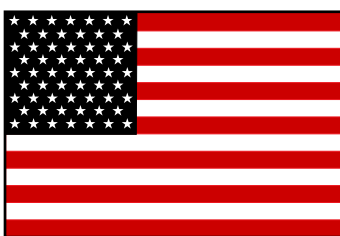


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AVIATION MAINTENANCE ALERTS



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**U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
WASHINGTON, DC 20590**

AVIATION MAINTENANCE ALERTS

The Aviation Maintenance Alerts provide a common communication channel through which the aviation community can economically interchange service experience and thereby cooperate in the improvement of aeronautical product durability, reliability, and safety. This publication is prepared from information submitted by those who operate and maintain civil aeronautical products. The contents include items that have been reported as significant, but which have not been evaluated fully by the time the material went to press. As additional facts such as cause and corrective action are identified, the data will be published in subsequent issues of the Alerts. This procedure gives Alerts' readers prompt notice of conditions reported via Malfunction or Defect Reports. Your comments and suggestions for improvement are always welcome. Send to: FAA; ATTN: Designee Standardization Branch (AFS-640); P.O. Box 25082; Oklahoma City, OK 73125-5029.

AIRPLANES

AMERICAN CHAMPION

American Champion; Models 7 and 8 Series; Empennage Brace Wire Failure; ATA 5500

During an after-takeoff climb, the pilot experienced empennage oscillations and severe vibration. He leveled and slowed the aircraft, and made a safe landing at the departure airport.

After parking the aircraft, the pilot and a technician discovered the left upper tail brace wire broken just below the jamnut at the top attachment. According to the technician, the available evidence indicated this failure was caused by metal fatigue in the threaded portion of the attachment/adjustment rod. He speculated this type of damage might be caused when hand pressure is applied to the brace wires during aircraft ground movement.

The submitter stated this is a common occurrence and suggested taking extreme care while moving the aircraft to avoid damage to the brace wires.

Part total time-3,000 hours over 34 years.

BEECH

Beech; Model C-23; Sundowner; Empennage Structural Cracks; ATA 5510

During a scheduled inspection, a technician discovered cracks in the stabilator structure.

The cracks were located in the stabilator spar (P/N 169-62000-603) and radiated from the cutouts for the hinge attachment on the right side. The submitter did not offer a cause or remedy for this defect.

The submitter recommends giving this area close attention during scheduled inspections.

Part total time not reported.

Beech; Model 58; Baron; Horizontal Stabilizer Crack; ATA 5510

While conducting a scheduled inspection, the technician found a crack in a structural member of the right inboard horizontal stabilizer.

The crack was approximately .5-inch long and was located in the lower radius of a structural channel (P/N 95-620010-85) used for the attachment of the forward spar. The technician previously found other cracks at this location and stated this defect is usually found where the mounting channel passes through the fuselage.

The submitter stated this location is very difficult to properly inspect and requires the development of unique inspection techniques. In order to replace the channel, it is necessary to remove the stabilizer.

Part total time-1,729 hours.

Beech; Model 58; Baron; Battery Drain Mast Failure; ATA 5300

A technician reported finding the battery drain mast (P/N 002-40001-33), located on the exterior of the nose baggage compartment area, cracked and broken.

The submitter stated this defect is prevalent on a large number of relatively new aircraft. He believes vibrations and insufficient base plate material thickness cause these defects. It appears that cracks develop adjacent to the base plate weld and can culminate in separation of the drain mast.

Part total time-19 hours.

Beech; Model 58P; Baron; Aileron Hinge Security; ATA 5751

After receiving Beech Maintenance Alert (MA) 00-03, dated August 31, 2000, a repair station technician conducted an inspection of their aircraft. The subject of MA 00-03 concerns the proper installation of aileron hinge fasteners.

During the inspection, the technician discovered the left aileron outboard hinge attachment screws (two) on the lower surface were not installed correctly through the hinge assembly. Two of the four screws were installed through the skin but missed the hinge assembly. The screw shanks missed the hinge and were binding on the aft side of the hinge as described in MA 00-03. The screws were retained only by the skin, and the binding was caused by contact with the aft side of the hinge.

Part total time not reported.

Beech; Model 58P; Baron; Nose Landing Gear Failure; ATA 3230

When the pilot selected the landing gear to the “up” position, the nose gear only partially retracted. The pilot was able to lower the gear and made a safe landing.

A maintenance technician found the nose gear retraction arm forward bolt (P/N AN4-12), used to attach the retraction arm to the drag brace retraction mechanism, sheared. This caused the switch arm AN3 bolt at the attachment point to fail.

The submitter speculated this damage was caused by a hard landing, which occurred approximately 300 operating hours prior and was entered in the aircraft maintenance records.

Part total time not reported.

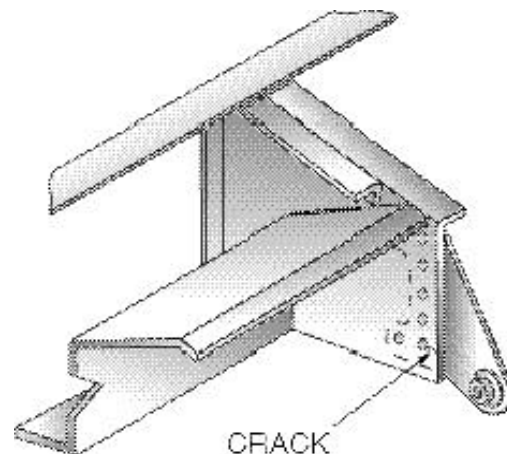
Beech; Model 76; Duchess; Wing Structure Defects; ATA 5712

During a 100-hour inspection, the technician found cracks associated with wing ribs at the left aileron location.

The cracks were located in the trailing edge of the wing ribs (P/N's 105-100010-1 and -2) adjacent to the left inboard and outboard aileron hinge bearing attachment brackets (P/N 105-100011-51). (Refer to the following illustration.) Both cracks began at the aft edge of each rib and migrated forward to the lower attachment rivet.

The submitter repaired this damage by fabricating and installing doublers for each rib. He also reported he has maintained nine Beechcraft Duchess' over the past 6 years, and these two repairs represent the 23rd and 24th repairs of this nature. Further, he stated the cracks seem to develop after approximately 2,500 hours of operation.

This defect presents a hazard to flight safety and, if not detected and corrected, may culminate in separation of the aileron.



Part total time-3,742 hours.

Beech; Model B99; Airliner; Abnormal Propeller RPM Operation; ATA 6122

The pilot reported the right engine RPM changes were very “sluggish” during power reductions on final approach for landing. He experienced a yaw in the direction of the right engine.

During an operational test, the technician found the propeller operation was sluggish and erratic. After he removed and replaced the propeller governor (P/N 8210-002AD), an operational test proved the problem was solved.

The submitter believes the propeller governor pilot valve stuck in the “closed” position. This prevented oil from draining from the hub and forced the propeller blades to remain at a pitch.

Part total time not reported.

Beech; Model 200; King Air; Engine Operation Degradation; ATA 6122

During a ground engine operational test, the technician found the left engine would only develop 89 percent N1 (compressor RPM).

After shutting the engine down, the technician inspected the fuel control (P3) air lines and found a “B-nut” was loose at the propeller governor. He determined engine operation was limited to 89 percent by leakage past the loose “B-nut.” The “B-nut” safety wire was broken, and he speculated vibration caused the “B-nut” to loosen. He could not determine a reason for the broken “B-nut” safety wire.

Part total time not reported.

Beech; Model 200; King Air; Landing Gear Component Failure; ATA 3230

After takeoff, the pilot retracted the landing gear. Several minutes later he heard a loud bang and noticed the green and red indicator lights for the left main gear were illuminated. The pilot lowered the landing gear and landed safely.

A technician inspected the landing gear system and discovered a nut (P/N 115-810029-1) used on the left main gear actuator (P/N 99-810057-152) failed. The nut was broken adjacent to a weld and rendered the landing gear actuator inoperative.

The submitter recommended frequent inspections of this assembly in accordance with the manufacturer’s recommended inspection criteria.

Part time since overhaul is 1,285 hours.

Beech; Model 300; King Air; Electrical System Defect; ATA 2530

While using the “Coffee Bar” equipment, the attendant noticed electrical power was lost. Shortly after resetting the tripped circuit breaker, the attendant detected a burning smell, and the circuit breaker opened again.

After termination of the flight, a technician found several electrical wire terminals and the circuit breaker associated with the “Coffee Bar” equipment, loose and heat damaged.

The submitter believes the loose terminals caused electrical arcing which produced excessive heat. He did not give the cause of the loose terminal connections.

Part total time-144 hours.

CESSNA**Cessna; Model 172M; Skyhawk; Excessive Rudder Free-Play; ATA 2721**

During a scheduled inspection, the inspector discovered excessive free-play at the rudder attachment.

The technician discovered the rudder hinge bushings were severely worn. This wear was not evident via visual inspection, but was discovered by gently pushing the rudder against the stops while watching the hinge alignment for movement. The extent of the bushing wear could not be fully detected until he removed the rudder.

The submitter stated this damage may not be detected without removing tension from the rudder control cables.

Part total time-4,943 hours.

Cessna; Model 182P; Skylane; Main Landing Gear Damage; ATA 3213

Approximately 3 years after installing a repair on the left main landing gear fairing, the submitter found damage to the gear leg during a scheduled inspection.

The rivets used for the patch were installed with the heads toward the spring gear leg (P/N 0741630-1). Over time, the heads wore into the gear leg. The wear went to a depth of .010 inch, which penetrated the shot peen treatment of the gear leg. During a conversation with the manufacturer, the submitter learned the gear leg would have to be replaced or repaired by blending and polishing out the damage and shot peening the area.

The submitter suggested repairs in this area incorporate abrasion or chafe protection to eliminate vibration and wear damage to the gear leg.

Part total time not reported.

Cessna; Model 182S; Skylane; Flight Control Cable Damage; ATA 2710

While complying with Cessna Service Bulletin (SB) 00-27-02, dated August 14, 2000, the technician discovered severe damage to an aileron control cable.

SB 00-27-02 lists inspection criteria to determine proper pulley groove radius at the point where the interconnect cable is attached to the quadrant. Approximately half of the aileron cable (P/N 0510105-328) was severed. (Refer to the following illustration.) It appears the cable damage was generated where the cable contacted the pulley (P/N 1260112-1) groove. At this point, the pulley groove has a hole drilled to accommodate a pin used to attach the pulley to the aileron control tube assembly forward of the control yoke.



Part total time-79 hours.

Cessna; Model 185F; Skywagon; Tailwheel Shimmy; ATA 3220

During the first landing after purchasing the aircraft, the pilot noticed excessive tailwheel shimmy.

During an investigation, a technician discovered the two tailwheel steering cables were different lengths. The left cable was 60 inches long, and the right cable was 58.5 inches long. Also, the original .125-inch cable stays had been replaced with .0625-inch soft cotter keys.

The owner stated a “new annual” inspection was completed on the aircraft just prior to the sale. Many times prospective aircraft purchasers rely on the representation of a “new annual” and avoid spending the extra money for a complete airworthiness inspection by a qualified maintenance person. The time and cost of an airworthiness review and inspection may be far outweighed by the later discovery of defective items. Otherwise, you can rely on the word of your friendly aircraft salesperson.

Part total time not reported.

Cessna; Model 210 Series; Centurion; Fuel Exhaustion Accidents and Incidents; ATA 2822

The following article was furnished by the FAA, Aircraft Certification Office, ACE-118W, located in Wichita, Kansas. The article is published in conjunction with FAA Safety Recommendation number 00.187.

The FAA is still receiving accident and incident reports related to fuel exhaustion on Cessna 210 Series aircraft. Most of those reports are the result of pilots neglecting to operate their aircraft in accordance with FAA Airworthiness Directive (AD) 94-12-08. Also, some pilots apparently are confused about the proper operation of the electric fuel boost pump. There are several different methods of operating both the normal (low boost) pump switch and the emergency (high boost) pump switch. Operation of those switches is adequately explained in the Pilot's Operating Handbooks (POH's).

The FAA is not proposing AD action on either FAA-Approved Airplane Flight Manuals (AFM's) or unapproved POH's unless there is evidence of conflicting information that would adversely impact safety. At this time, there is no evidence of conflicting information regarding fuel boost pump operation on these aircraft, but there is evidence of a lack of pilot awareness about the different procedures used during fuel boost pump operation.

The FAA recommends that pilots maintain a current knowledge of all procedures applicable to the aircraft they operate. This applies to aircraft with either an AFM or POH. Most aircraft have placarded information on the instrument panel or other areas of the cockpit. Details of cockpit control operating procedures are often presented in the advisory material of the manuals provided by the airframe, engine,

or component manufacturer. To maintain an adequate level of pilot proficiency, many type clubs provide operating information about aircraft that are out of production.

Part total time not applicable.

Cessna; Model 310L; Landing Gear Failure; ATA 3210

During an after-landing roll, the right main landing gear collapsed.

While preparing to move the aircraft off of the runway, a technician discovered the side brace (P/N 0841100-4DN) was broken. It appeared the failure began when the attachment lobe on the side brace fractured during normal landing impact with the runway. There was evidence of a pre-existing crack.

The submitter suggested this area be given close attention during scheduled inspections.

Part total time not reported.

Cessna; Model 402C; Businessliner; Elevator Damage; ATA 5520

In the process of changing the right elevator hinge bearings, the technician removed the elevator (P/N 5093400-12).

While cleaning the inside of the elevator control tube (P/N 5093404-2), the technician noticed holes at three locations. The holes were caused by severe corrosion, and the entire control tube was affected. Due to the severity of this damage, he replaced the control tube.

The submitter suggested giving this area close attention during scheduled inspections and maintenance.

Part total time not reported.

Cessna; Model 414A; Chancellor; Engine Oil Strainer Problem; ATA 8550

This aircraft was modified to "Series VII" by installing a Supplemental Type Certificate (STC). As part of the STC, an engine oil system strainer kit (P/N 1737-4) was installed.

The submitter of this report complained the oil strainer element (P/N EK9052V) "plugs up and has no bypass." This limits oil flow to the waste gate and does not allow development of full engine power. After installing a new strainer element, the engine operates normally for 5 to 15 hours before these events reoccur.

Part total time-10 hours.

Cessna; Model 421C; Golden Eagle; Elevator Torque Tube Security; ATA 5552

During a scheduled inspection, the technician discovered excessive differential free-play between the left and right elevators. Using only hand pressure, the technician held one elevator surface firm and was able to move the other surface approximately 1 inch. This proved true for both elevator surfaces.

The elevator control surfaces on this aircraft are attached to a flanged collar with a taper pin (P/N 5035017-1). The submitter stated, "The taper pin works loose over time allowing the tapered hole in the flanged collar and the torque tube to wear to an oval shape." The increasing wear resulted in progressively more free-play.

The submitter believes this defect is caused by a design deficiency. The only repair provided by the manufacturer is to replace the collar with a new-style longer collar. Ironically, the collars installed on this aircraft were the new-style longer collars. The only approved repair for a second occurrence of this defect is to install a new torque tube assembly, which comes with a shorter collar.

This area deserves close attention during scheduled inspections.

Part total time not reported.

Cessna; Model 425; Corsair; Cabin Blower Fan Failure; ATA 2121

The crew reported a "plastic" burning smell during flight. There were no other symptoms, and the crew completed the intended flight.

A technician investigated and found all the cabin blower fan blades (plastic) broken off and lying in the auxiliary heat assembly. One of the blades contacted the heater coils and partially melted. He did not offer a reason for the fan blade attachment failure.

This area deserves close attention during scheduled inspections.

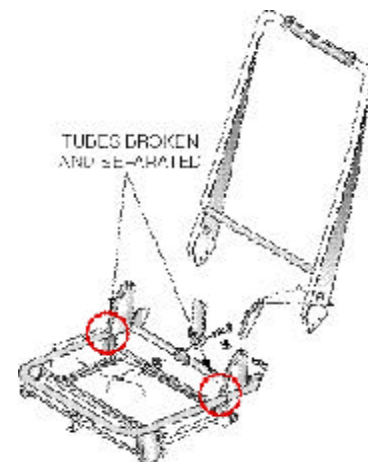
Part total time-294 hours.

COMMANDER**Commander; Model 114; Seat Failure; ATA 2510**

While preparing for a flight, the back of the pilot's seat broke and fell into a recline position.

A maintenance technician found the horizontal seat-frame tubes (P/N 49205-503) broken. (Refer to the following illustration.) Airworthiness Directive (AD) 85-03-04, Revision 2, concerns this subject and references Gulfstream Service Bulletin (SB) 114-21A, Revision 1.

It is interesting that AD 85-03-04, R2, is applicable to aircraft serial numbers 14,000 through 14,149 while SB 114-21A, R1, applies to aircraft serial numbers 14,000



through 14,540. This leaves 391 aircraft, including this particular aircraft, where AD 85-03-04, R2, does not apply. The manufacturer confirmed the seat-frame material and design is the same for all 540 aircraft. The FAA, Airplane Certification Office, ASW-100, issued AD 85-03-04, R2, and could not explain why these 391 aircraft were excluded.

Part total time-1,990 hours.

DIAMOND

Diamond; Model DA20-C1; Katana; Exhaust System Failures; ATA 7810

The submitter encountered several exhaust stack failures on their fleet of like aircraft.

These failures culminated in separation at the engine cylinder exhaust port attachment flanges. The operator grounded their fleet until all the exhaust stacks were inspected and a cause determined. At the time of this report, the cause had not been determined; however, if further information is received, it will appear in a future edition of this publication.

Part total time-200 hours.

LUSCOMBE

Luscombe; Model 8F; Silvaire; Defective Aileron; ATA 5751

After receiving a new aileron from the manufacturer, the technician discovered it would not fit the aircraft.

The new right wing aileron center hinge fitting was misaligned and could not be properly fitted. The technician contacted the manufacturer and received a new undrilled center hinge fitting (P/N U18279). He installed the new fitting on the aileron and fitted it to the wing. The aileron control system functioned normally during a flight test.

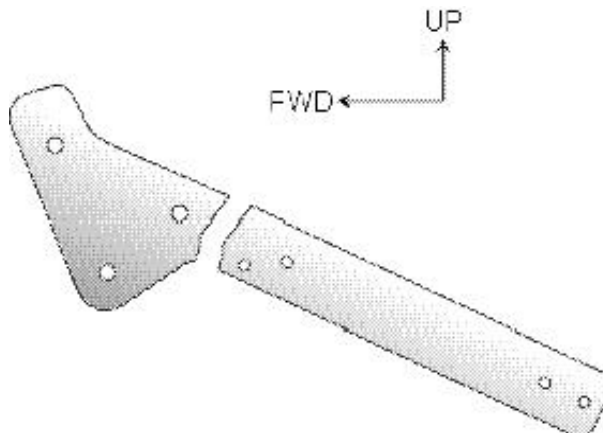
Part total time-0 hours.

MOONEY

Mooney; Model M20J; Defective Wing Flap Hinge; ATA 5753

While conducting a preflight inspection, the pilot noticed the right wing flap had excessive travel and play with the flaps in the “down” position.

A technician removed the right wing flap faring and found the inboard hinge (P/N 210104) broken just below the hole for the aft attachment bolt. (Refer to the following illustration.) When he examined the broken metal, it appeared to be a “fresh” break.



The location and configuration of the flap hinge makes inspection difficult. However, the submitter recommended thoroughly inspecting this area at frequent intervals, especially on high-time aircraft.

Part total time-9,255 hours.

Mooney; Model M20K; Engine Intake Crack; ATA 7310

While changing the engine oil, the technician noticed a heavy fuel stain at the flange end of an induction tube.

After removing the flange retainer, the technician discovered the number four cylinder intake pipe (P/N 649264) was cracked around approximately one-half of its diameter.

Teledyne Continental Motors (TCM) issued Service Bulletin (SB) 98-8, which recommends replacing the one-piece induction pipes for cylinders one and three. The submitter recommended installing a two-piece pipe on the number two and number four cylinders.

Part total time-434 hours.

PIPER

Piper; Model PA 28-140; Cherokee; Cabin Entry Step Defect; ATA 5310

While conducting a scheduled inspection, the technician discovered the doubler (P/N 63452-004) for the cabin entry step severely corroded and cracked.

The submitter speculated this damage was caused by the accumulation of moisture and foreign material contaminating the area and creating a corrosive environment. The area is provided with “drain holes;” however, it appears they may not be adequate and are commonly found plugged and obstructed. Another contributing factor to the detriment

of this part is the fact that it is constructed of steel and is fastened to an aluminum structure. The entry step is attached to a primary fuselage structure, and its failure could degrade structural integrity.

The submitter found a similar defect on one other occasion.

Part total time not reported.

Piper; Model PA 28-151; Warrior; Landing Gear Failure; ATA 3213

The pilot reported that during a landing, the aircraft “bounced,” he heard a loud noise, and the left main landing gear collapsed.

While removing the aircraft from the runway, a technician discovered the left main landing gear lower section of the strut was missing. The “scissors” bolt was also missing and could not be located.

The submitter speculated the “scissors” bolt either broke or the nut came off, and the bolt migrated out and was lost. It would be wise to check the security and proper installation of all landing gear components at every opportunity, including preflight inspections.

Part total time-3,121 hours.

Piper; Model PA 28-181; Archer; Wing Spar Damage; ATA 5711

During an annual inspection, the technician discovered fretting damage on the lower wing spar.

The damage was located where the left and right main landing gear structures (P/N's 35644-04 and -05) are attached to the lower wing spar caps (P/N's 62073-02 and -03). Further inspection revealed the fasteners (P/N AN4-11A), used for this attachment, were at less than the specified torque value, and the fastener holes were elongated in the landing gear and the spar cap. The technician believes the loose fasteners allowed vibration and movement of these members to cause elongation of the holes and increase the relative motion of the members.

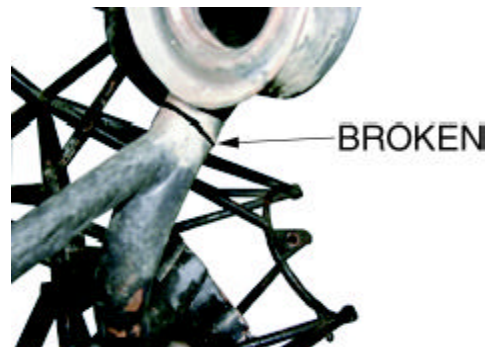
The submitter could not determine a reason for the loose bolts.

Part total time-4,040 hours.

Piper; Model PA 28R-200; Arrow; Engine Mount Crack; ATA 7120

During a 100-hour inspection, the inspector discovered a crack on the engine mount structure.

The engine mount (P/N 67119-49) was cracked at the top left side. (Refer to the following illustration.) The submitter speculated, if not corrected, this defect could cause in-flight engine separation. Piper Service Letter (SL) 568 deals with this subject and provides inspection criteria and a repair scheme for defects found. In addition, a



similar article, involving a PA 28R-201 aircraft, appeared on page 10 of the September 2000 edition of this publication. The engine mount (P/N 67119-57) used on this aircraft is of the same design. The FAA Service Difficulty Reporting system data base contains 12 additional reports of defective engine mounts.

All operators are encouraged to obtain Piper SL 568 and comply with its instructions. Additionally, the submitter recommended closely inspecting the engine mount at 100-hour intervals.

Part total time not reported.

Piper; Model PA 31-350; Chieftain; Bulkhead Crack; ATA 5312

During a scheduled inspection, the inspector found a crack in a bulkhead doubler.

The doubler (P/N 40682-10) is installed at the top of a bulkhead at fuselage station (FS) 317.75. This is the location of the forward attachment point for the vertical stabilizer. The crack was approximately .75 inch long and ran along the top of a washer at the upper left side of the doubler. After disassembly, the technician found another crack approximately 1.25 inches long in the bulkhead. This is a critical structural assembly, and defects like this can have a negative impact on structural integrity.

Airworthiness Directive (AD) 96-12-12 and Piper Service Bulletin 636A deal with this subject. However, according to the serial number, AD 96-12-12 does not apply to this particular aircraft. The submitter recommended that regardless of the inapplicability of AD 96-12-12, this area deserves close attention during inspections.

Aircraft total time-14,601 hours.

Piper; Model PA 32R-300; Cherokee Lance; Engine Oil Cooler Failure; ATA 7921

Approximately 2 minutes after takeoff, the pilot noticed a "zero" indication on the oil pressure indicator. He immediately returned to the departure airport for landing. Even though the engine failed on final approach, the pilot was able to land the aircraft safely.

The lower surface of the engine cowl and the entire aircraft were covered with engine oil. During an investigation, a technician discovered a hole in the bottom of the engine oil cooler. This oil cooler was installed using the authority of a "cowl modification" Supplemental Type Certificate approximately 1 year prior to this occurrence. The FAA has received other similar reports of engine oil cooler leakage.

The submitter gave no further details concerning the nature or cause for the hole in the bottom of the oil cooler.

Part total time-117 hours.

Piper; Model PA 32RT-300T; Turbo Lance; Dipstick Defect; ATA 8550

After a flight, the pilot delivered the aircraft to a maintenance shop and reported the engine oil dipstick was missing.

A technician investigated and found the engine oil dipstick dislodged from the cap and fell into the oil filler tube. After a close inspection, he found no evidence that the roll pin, used to attach the dipstick to the oil cap, was ever installed.

This was a factory-overhauled engine (TIO-540), which had been in service a short time. The dipstick could have migrated down the oil filler tube far enough to cause internal engine damage. The submitter recommended inspecting the assembly for security at the next opportunity.

Part total time 206 hours.

Piper; Model PA 38-112; Tomahawk; Alternator Defect; ATA 2421

During a 100-hour inspection, the technician noticed all the alternator cooling fan blades were missing.

After further investigation, the technician determined the cooling fan blades had broken from the mounting plate and separated from the alternator. Originally, the blades were welded to the aluminum mounting plate, and it appeared each of the weld attachments failed.

The submitter attributed this defect to metal fatigue due to centrifugal force and vibration.

Part total time-294 hours.

Piper; Model PA 44-180; Seminole; Engine Mount Defect; ATA 7120

A maintenance technician found the left engine mount broken during a 100-hour inspection.

The tubular member of the engine mount (P/N 86212-002) was broken between the upper and lower outboard "Lord" mount locations. A small section of the tube metal was missing at the location of the fracture. Piper Service Bulletin (SB) 937 and Service Letter (SL) 719 deal with this subject and had not previously been incorporated.

The submitter recommended that operators who have not complied with SB 937 and SL 719, comply as soon as possible.

Part total time not reported.

**Piper; Model PA 46-350P; Malibu Mirage; Compounding Problems;
ATA's 7931 and 3442**

Following takeoff, the pilot noticed a decrease in engine oil pressure and elected to return to the departure airport.

After landing, the pilot taxied the aircraft back to the parking ramp and kept the engine RPM at approximately 1,500. This was necessary to keep the engine oil pressure above the "red line" and required additional braking action to maintain control of the aircraft.

Consequently, the brakes overheated, and by the time the aircraft arrived at the parking ramp, the right brake caught fire. The fire department was standing by and immediately extinguished the fire. Fire damage was confined to the right brake, tire, and possibly heat damage to other components. The brake fire could have placed the aircraft and occupants in great peril. If the pilot had shut down the aircraft immediately after landing, this fire could have been prevented.

Getting back to the oil pressure degradation problem, the technician discovered several pieces of material (dirt or sand) in the oil pressure relief valve seat. This allowed engine oil to bypass through the relief valve and cause a lower pressure indication.

Part total time not reported.

HELICOPTERS

BELL

Bell; Model 222U; Main Rotor Blade Defect; ATA 6210

During a flight, the pilot noticed a vibration that seemed to come from the main rotor system. The vibration became progressively more severe, and he made a safe precautionary landing.

While investigating, a technician discovered the lower pendulum support (P/N 222-011-114-103) was broken, and the pendulum missing from one of the main rotor blades. Checking further, he found a nick in the trailing edge of the rotor blade. After removing the remainder of the pendulum assembly, an examination indicated the "tang" fractured, and there was evidence of a previous crack. He asked the manufacturer for an engineering evaluation and sent them the available parts.

The manufacturer's engineering report stated: "Inspection of the pendulum support revealed improper surface finish and excessive machining marks, which led to the failure of the support. Investigation also revealed that one other new part in stock exhibited the same discrepancies as the failed part. The surface finish on the edge break did not meet the engineering drawing requirements. Consequently, Bell Helicopters is proceeding with an action plan to remove from service, all the supports manufactured by that specific vendor."

Part total time-3,058 hours.

EUROCOPTER

Eurocopter; Model AS-350BA; Ecureuil; Compressor Stalls; ATA 7250

The pilot reported experiencing “small compressor stalls” (popping sounds) when the collective was lowered. This helicopter uses an Arriel Model 1B powerplant.

This was an infrequent occurrence, which happened over several days. A technician conducted a complete inspection of the engine compressor, bleed valve, and related systems without finding a cause for the compressor stalls. However, he inspected the engine “hot section” and found several damaged and broken turbine blades.

Part time since overhaul-2,015-hours.

MCDONNELL DOUGLAS

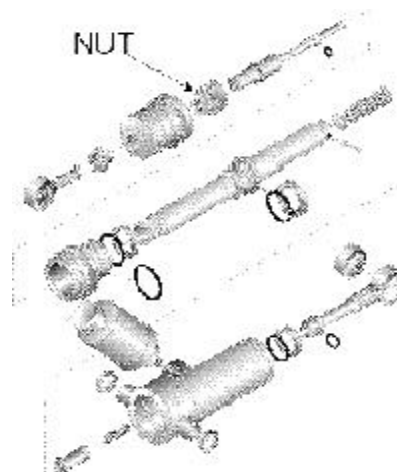
McDonnell Douglas; Model 500N; Excessive Cyclic Play; ATA 6710

After returning from a flight, the pilot reported the cyclic control had excessive longitudinal play.

A technician found the cyclic grip would move several inches before any input was sent to the rotor system. He discovered the “unilock” nut (P/N 369H7024) loose, which allowed movement of the input rod-end. (Refer to the following illustration.) Loss of the nut could lead to separation of the rod-end from the “unilock” assembly and leave the pilot with no longitudinal control.

A short time prior to this flight, maintenance personnel replaced the “unilock” assembly (P/N 369A7010-501) with a new unit.

Part total time-24 hours.

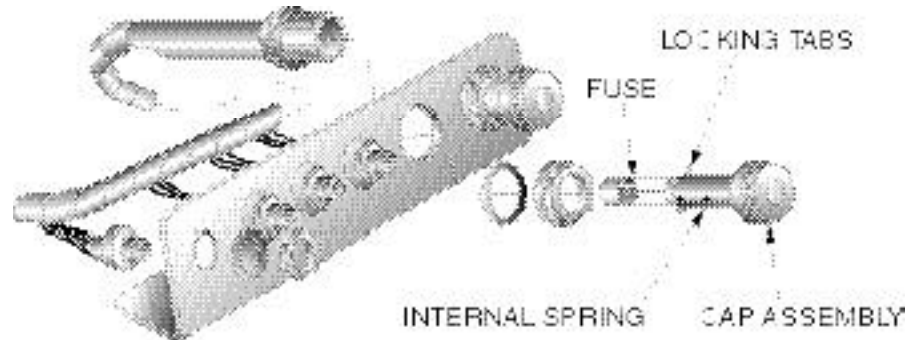


ROBINSON**Robinson; Model R-22; Mariner; Defective Fuse Holders; ATA 2400**

The submitter reported finding several defective electrical system fuse holders.

The fuse holder cap locking tabs were bent and broken, and the springs were corroded and stuck in the compressed position. Failure of a fuse holder will cause an interruption of electrical power and failure of the affected component. (Refer to the following illustration for an example.)

The submitter recommended the manufacturer construct the fuse holders of a more durable material and change the design to make them more structurally substantial.



Part total time-300 to 500 hours.

AMATEUR, EXPERIMENTAL, AND SPORT AIRCRAFT

ROTARY AIR FORCE

Rotary Air Force (RAF); Model 2000; Engine Power Loss; ATA 7400

A person claiming 30-plus years of gyroplane experience, including 7 years with this machine, submitted this report.

The kit manufacturer recommends using a "Subaru Legacy 2.2 or 2.5 liter engine" for this gyroplane. Most of these engine installations do not utilize the fuel injection and ignition systems that come with the engine from an automotive application. RAF recommends using a two-barrel carburetor and, as of 1 year ago, an aftermarket ignition system, which they supply.

The submitter witnessed two separate incidents involving recently-soloed students experiencing ignition-related power loss. One of these incidents resulted in complete loss of engine power and destruction of the machine. Fortunately, there were no

personal injuries related to these incidents. The submitter stated he has personally experienced two similar failures with his own gyroplane.

These ignition system failures may be manifested by backfiring during engine start, engine misfiring, or failure during power reductions, and/or the engine running on only two of the four cylinders. Any one, or all of these symptoms, may be experienced, and they are usually intermittent.

Operators of this gyroplane should be aware of the possibilities presented in this article.

Part total time not applicable.

STAUDACHER

Staudacher; Model S300; Flight Control Failure; ATA 2710

This article was printed in the November 2000, edition of this publication and is being reprinted to clarify details of aircraft damage.

While performing aerobatic maneuvers, the pilot executed a one-half snaproll to the left, and the left aileron separated from the aircraft. The pilot was able to land the aircraft and was not seriously injured; however, the aircraft was destroyed.

FAA inspector Tim Anderson, of the Milwaukee, Wisconsin, Flight Standards District Office investigated this accident. He found the left aileron center hinge failed due to metal fatigue which caused the aileron failure and separation. The aileron hinge design uses three rod-end bearings attached to an aluminum block which is attached to the wing spar. The threaded stud of the rod-ends uses a jamnut for adjustment. The failure occurred between the jamnut and the aluminum mounting block. A metallurgical examination of the broken rod-end revealed the threaded stud was not heat treated. It failed due to bending which led to metal separation.

The manufacturer recommends using heat-treated rod-end bearings (P/N REP3M6-2N) at the aileron hinge points. We urge all aircraft builders to consult the kit manufacturer before substituting or changing any parts recommended or supplied with a kit.

The FAA Service Difficulty Reporting Program data base contains three additional accidents involving this make of aircraft. One of the accidents was caused by separation of the right aileron under different circumstances.

Part total time-393 hours.

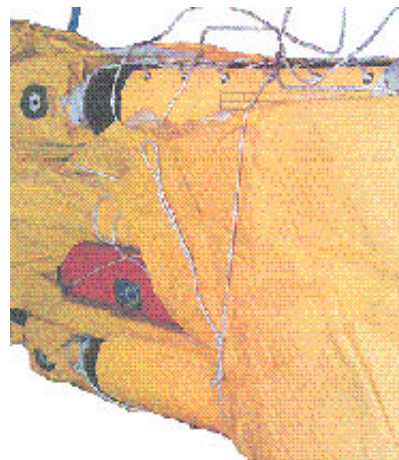
ACCESSORIES

LIFERAFT

An FAA-certified repair station received an Eastern Aero Marine liferaft (Model EAM-T46) for overhaul.

During an initial inspection, the technician discovered a “temporary packing tie” was left on the liferaft after it was packed. (Refer to the following illustration.) The “temporary packing tie” is used as an aid for installing the liferaft into the container after manufacture and inspections. The presence of this “temporary packing tie” would prevent deployment of the liferaft.

This liferaft was manufactured in November 1998, and the submitter speculated the “temporary packing tie” might have been overlooked at that time. It is also possible the “temporary packing tie” may have been overlooked at another time. All operators should be aware of this possibility and take appropriate action.



Part total time is not applicable.

AIR NOTES

SUBSCRIPTIONS

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In the past, we furnished the GPO subscription form in this publication. The older issues which contain the subscription form, may not have current pricing information. Since GPO controls price increases, contact GPO for current subscription information.

ELECTRONIC VERSION OF MALFUNCTION OR DEFECT REPORT

One of the recent improvements to the AFS-600 Internet web site is the inclusion of FAA Form 8010-4, Malfunction or Defect Report. This web site is still under construction and further changes will be made; however, the site is now active, usable, and contains a great deal of information.

Various electronic versions of this form have been used in the past; however, this new electronic version is more user friendly and replaces all other versions. You can complete the form online and submit the information electronically. The form is used for all aircraft except certificated air carriers who are provided a different electronic form. The Internet address is:

<http://av-info.faa.gov/isdr/>

When the page opens, select "M or D Submission Form" and, when complete, use the "Add Service Difficulty Report" button at the top left to send the form. Many of you have inquired about this service. It is now available, and we encourage everyone to use this format when submitting aviation, service-related information.

SERVICE DIFFICULTY PROGRAM DATA ON THE INTERNET

The FAA, Service Difficulty Reporting (SDR) Program is managed by the Aviation Data Systems Branch, AFS-620, located in Oklahoma City, Oklahoma. The information supplied to the FAA in the form of Malfunction or Defect Reports, Service Difficulty Reports, or by other means, is entered into the SDR data base. This information has been available to the public through individual written request. This method has provided the aviation public with an invaluable source of data for research or finding specific problems and trends.

The Service Difficulty Reporting Program relies on the support of the aviation public to maintain the high quality of data. AFS-620 has included the SDR data on an Internet web site, which is now available to the public. Using the web site will expedite the availability of information. The Internet web site address is:

<http://av-info.faa.gov>

On this web site, select "Aircraft" along the top of the page, next select "Service Difficulty Reporting," and then select "Query SDR Data."

This web site is now active; however, it is still under development and improvements are being made. We ask for your patience, ideas, and suggestions. If you find the web site useful, let us know. Also, spread the word about the availability of information on the web site. To offer comments or suggestions, you may contact the web master or call Tom Marcotte at (405) 954-4391.

Please remember that the information contained in the SDR data base is only as good as the input we receive from the aviation public. Also, the data used in production of this publication is derived from the SDR data base. In that regard, we solicit and encourage your participation and input of information.

This publication, as well as many other publications, was previously included on the "FedWorld" internet site. The FedWorld site was terminated on April 15, 2000. The data previously listed there is presently being transferred to the "av-info" web site.

ADDRESS CHANGES

In the past, the Designee Standardization Branch (AFS-640) maintained the mailing list for this publication. Now, the Government Printing Office (GPO) sells this publication and maintains the mailing list; therefore, please send your address change to:

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710 N. Capital Street N. W.
Washington, DC 20402

You may also send your address change to GPO via FAX at: (202) 512-2168. If you FAX your address change, please address it to the attention of: **SSOM, ALERT-2G**.

Whether you mail or FAX your address change, please include a copy of your old address label, and write your new address clearly.

IF YOU WANT TO CONTACT US

We welcome your comments, suggestions, and questions. You may use any of the following means of communication to submit reports concerning aviation-related occurrences.

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You can access current and back issues of this publication from the internet at:

<http://afs600.faa.gov>

This web site also has view, search, E-Mail, and M or D submit functions.

AVIATION SERVICE DIFFICULTY REPORTS

The following are abbreviated reports submitted between November 16, 2000, and December 11, 2000, which have been entered into the FAA Service Difficulty Reporting (SDR) System data base. This is not an all inclusive listing of Service Difficulty Reports. For more information, contact the FAA, Regulatory Support Division, Aviation Data Systems Branch, AFS-620, located in Oklahoma City, Oklahoma. The mailing address is:

FAA

Aviation Data Systems Branch, AFS-620

PO Box 25082

Oklahoma City, OK 73125

These reports contain raw data that has not been edited. If you require further detail please contact AFS-620 at the address above.

FEDERAL AVIATION ADMINISTRATION

Service Difficulty Report Data

Sorted by Aircraft Make and Model then Engine Make and Model. This Report Derives from Unverified Information Submitted By the Aviation Community without FAA review for Accuracy.

ACFT MAKE ACFT MODEL REMARKS	ENG MAKE ENG MODEL	COMP MAKE COMP MODEL	PART NAME PART NUMBER	PART CONDITION PART LOCATION	DIFF-DATE FAA REPORT NO.	T TIME TSO
	ALLSN 250C20B		BLADE 6898782	MISSING 2ND ST BLADE RT	10/20/2000 2000120800085	1644
(CAN) N1 AND N2 SYSTEMS ABLE TO ROTATE PRIOR TO DISMANTLING, TURBINE FULLY DISMANTLED. NO EVIDENCE OF FOD UPSTREAM OF 2ND STAGE TURBINE WHEEL. HEAVY D.O.D. DOWNSTREAM OF 2ND WHEEL. 2ND TURBINE WHEEL MISSING ONE TURBINE BLADE. QTY SIX BLADES APPROX. 180 INCHES AWAY EXHIBIT DAMAGE ON THE TRAILING EDGES. THE NR 8 STATIONARY LAB SEAL IS BROKEN IN TWO PIECES, HOWEVER, BEARING LOCATION IS ONLY MINIMALLY EFFECTED. GP FORWARD ROTATING LAB SEAL BROKEN, PART OF SEAL HAS NOT BEEN LOCATED. 1ST AND 2ND BLADE PATHS EXHIBIT SUBSTANTIAL TIP RUB INDICATIONS. ALL OIL NOZZLES, SHAFTS, SUPPORTS AND						
	GARRTT TPE33110U	GARRTT 310355011	TURBINE 31081821	BROKEN T/E OF BLADE	07/24/2000 2000112100118	3796
(CAN) ENGINE REMOVED FOR HIGH TAXI AND GROUND IDLE SNAG. DISASSEMBLY REVEALED NR 1 COMPRESSOR IMPELLER HAD A PIECE BROKEN OUT OF THE TRAILING EDGE OF 1 BLADE .085 INCH UP FROM THE PLATE .480 INCH FROM THE OUTER RIM OF THE PLATE. THE RESULTING DAMAGE DOWN STREAM FROM THE NR 1 IMPELLER IS EXTENSIVE. IT CONSISTS OF 3101829 SHROUD, 3103496 DIFFUSER, 893482, NR 2 IMPELLER, 893384 DIFFUSER, 3102022 HOUSING, 3108164-2 NR 1 ROTOR, 3102106-10 NR 2 ROTOR, 3102655-2 NR 3 ROTOR, 3101513-17 STATOR, 3101515-6 STATOR, 5 OF 3101846 NOZZLE SEGMENTS, 12 OF 3103128 SHROUD SEGMENTS. (X)						
	GE T700T1C	GE T700SERIES	ENGINE T700	WRONG PART ENGINE	07/10/2000 2000120100081	
(AUS) GENERAL ELECTRIC T700 GAS TURBINE ENGINES AS USED BY MILITARY HELICOPTERS WERE FOUND TO CONTAIN UNAPPROVED PARTS. GE T700 ENGINE COMES FROM THE SAME FAMILY OF ENGINES AS GE CT7 ENGINE. THIS DEFECT RECEIVED FROM ADF AS WARNING TO CIVILIAN OPERATORS OF GE CT7SERIES ENGINES. FOLLOWING PARTS AFFECTED: NUT SELF-LOCKING - NSN 5310-01-102-8856 - GE P3031T29. STUD SHOULDERED - NSN 5307-01-099-2481 - GE P4041T11P02. NUT SELF-LOCKING - NSN 5310-00-129-6126 - GE P/N R1180. STUD SWIRL PLATE - NSN 53 07-01-235-7902 - GE P4076T45P02. W8 COUNTERBALANCE - NSN 2840-01-143-3372 - GE P/N 4069T98P04. TUBE OIL SUMP - NSN						
	LYC IO360A1B6		CAMSHAFT	MAKING METAL	07/03/2000 2000120500199	1400
DURING 50-HOUR INSPECTION, FOUND A FEW CHIPS IN OIL FILTER. 10 HOURS LATER, NO CHIPS FOUND. DURING 100-HOUR INSPECTION, AGAIN, SOME CHIPS. ENGINE CONTROLLED WITH A MORE DETAILED INSPECTION. FOUND CAMSHAFT CYLINDERS 3 AND 4 WORN OUT EXTREMELY. AIRPLANE WAS USED FREQUENTLY FOR GLIDER TOWING.						

LYC IO540K1G5	LYC	CRANKCASE LW13838	CRACKED ENGINE	09/01/2000 2000120800148	220
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(AUS) ENGINE CRANKCASE CRACKED IN AREA ADJACENT TO NR 2 CYLINDER TOP FORWARD BASE STUD. FOLLOWING ENGINE BULK STRIP, THE FOLLOWING DEFECTS WERE ALSO NOTED: CRANKCASES BADLY FRETTED ON MATING FACES. INTERMEDIATE MAIN BEARINGS LOOSE IN MAIN TUNNEL CAUSING WEAR TO TUNNEL. MATERIAL CHIPPED AWAY FROM TUNNEL LOCATING DOWEL HAD DAMAGED BEARING SURFACE. SUBMITTER SUSPECTED LOCATING DOWEL LOOSE IN CRANKCASE. SIGNIFICANT TANG DAMAGE FROM BEARINGS ROTATING IN CRANKCASES. CSU DRIVE GEARSHAFT IN FRONT OF CRANKCASE NOT SECURED CORRECTLY AND SHAFT SPINNING IN CRANKCASE. SEALANT USED WAS A RED SILICON MATERIAL USED MEASURING 0.0035 INCHES THICK WHEN REMOVED. (X)

PWA JT9D7R4E	PWA	COMPRESSOR	CONTAMINATED ENGINE	07/13/2000 2000112900107	
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(AUS) HP COMPRESSOR DISCS (STG 8, 10, 12 AND 14) FOUND WITH SILVER PLATE CONTAMINATION, CAUSED BY USE OF SILVER PLATED NUTS FITTED AT TIE ROD LOCATIONS.

PWA JT9D7R4E	PWA	COMPRESSOR 716913	CONTAMINATED TURBINE	07/13/2000 2000112900108	
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(AUS) HP COMPRESSOR DISCS (STG. 8, 10, 12 AND 14) FOUND WITH SILVER PLATE CONTAMINATION CAUSED BY USE OF SILVER PLATED NUTS FITTED AT TIE ROD LOCATIONS.

PWA PT6A34AG	PWA	DUCT 311178001	CRACKED TURBINE SECTION	07/02/2000 2000112200061	
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(AUS) TURBINE DUCT ASSEMBLY CRACKED LONGITUDINALLY WITH A SECTION BROKEN OUT. SUBMITTER SUSPECTED CAUSED BY VIBRATION DUE TO WORN SPLINE ON PROPELLER REDUCTION GEARBOX HOUSING ASSEMBLY PN

PWA PT6A34AG	PWA	DUCT 311178001	CRACKED TURBINE SECTION	09/06/2000 2000112200062	
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(AUS) TURBINE DUCT ASSEMBLY CRACKED. SAME PROBLEM HAD OCCURRED 21.6 HOURS PREVIOUSLY (REF: AU000908). INVESTIGATION FOUND THE FOLLOWING PROBLEMS: 1. SECOND STAGE SUNGEAR HEAVY WEAR AND SPALLING. 2. SECOND STAGE PLANETARY GEARS (5OFF) HEAVY WEAR AND SPALLING. 3. FRONT REDUCTION GEARBOX CASE NR 5 BEARING JOURNAL WORN (LOOSE BEARING). 4. FIRST STAGE CARRIED OVER LIMITS ON BALANCE. 5. ZERO TORQUE ON NR 5 BEARING RETAINING BOLTS. (X)

AMTR KITFOX SPEEDS 2000113000044		HINGE 93004	FAILED RUDD HINGE BOLTS	07/23/2000	360
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ALL 4 RUDDER HINGE BOLTS FAILED ON LANDING RESULTING IN LOSS OF CONTROL OF AIRCRAFT ON THE RUNWAY. AIRCRAFT WENT OFF RUNWAY INTO THE GRASS (LEFT SIDE RUNWAY). AIRCRAFT THEN TAXIED TO PARKING WHERE FAILED RUDDER HINGES DISCOVERED. REPAIRED BROKEN BOLTS. (X)

AMTR LANCAIR235		BOLT	MISALIGNED NOSE GEAR	08/11/2000 2000111600071	118
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NOSE GEAR ALIGNING STRAP BOLT CAUGHT ON NOSE GEAR DOOR PIVOT HINGE ASSEMBLY. RESULTED IN GEAR UP LANDING. (X)

AMTR MK1 2000112200060	AMTRNC LANCAIR320	CONNECTOR 6409231	DISCONNECTED LANDING GEAR POS	09/16/2000	
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(AUS) LEFT MAIN LANDING GEAR DOWNLOCK MICROSWITCH WIRE SPADE CONNECTOR DISCONNECTED FROM SWITCH LUG. (X)

AMTR SH2R	LYC IO360B1E	BENDIX RSA5AD1	DIAPHRAGM 2539559F	WORN BUSHINGS	08/15/2000 2000113000035	1000
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SERVO HAD WORN THROTTLE SHAFT BUSHINGS AND IDLE LINK LEVER HOLES. COMPONENT APPEARED TO HAVE BEEN SUBJECTED TO ABNORMAL VIBRATION INPUT. TIME SINCE LAST OVERHAUL - MAY 1965. ALL INSPECTION DATA IS AVAILABLE ON JWO 2705. (X)

AMTR SX300		PUMP	MISINSTALLED	06/04/2000 2000112900018	984
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AFTER RUNNING LEFT WING TANK DRY, PILOT SWITCHED TO RIGHT WING TANK. ELECTRIC FUEL PUMP FAILED TO PICK UP FUEL AGAIN. INVESTIGATION REVEALED ELECTRIC PUMP HAD BEEN INSTALLED ON FIREWALL INSTEAD OF IN NOSE WHEELWELL AS PLANS INDICATED.

AYRES S2R 2000113000052	GARRTT TPE331*	HOSE 1118	RESTRICTED FUEL SOV TO PUMP	07/31/2000	
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HOSE INTER RUBBER EXPANDED TO RESTRICT FUEL FLOW AT FUEL SHUT-OFF VALVE. PART TIME IN SERVICE: 281 HOURS. REF: S-2 ILLUSTRATED PARTS CATALOG FIG 2-7, ITEM 15, P/N 111-312-312-8-0070. (X)

BBAVIA 8GCBC	LYC O360C2E	BRACKET LW13039	FAILED MIDDLE	10/12/2000 2000120800084	2431
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(CAN) IN-FLIGHT FAILURE OF REAR HALF OF BRACKET CAUSING ALTERNATOR FORWARD MOUNT TO BREAK. PILOT NOTICED BURNING SMELL IN COCKPIT FROM ALTERNATOR BELT AND UPON LANDING, INVESTIGATED AND FOUND ALTERNATOR HANGING ONLY BY THE WIRES AND SUPPORT OF 1 SCAT HOSE. (X)

BELL 205A1	LYC T5313B	REGULATOR 117024093	FAILED FUEL REGULATOR	05/09/2000 2000112200078	
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(CAN) - BLEED BAND OPENED WITH COLLECTIVE PITCH UP AND TORQUE INDICATOR SPIKED AND N1 SPOOL UP. BLEED BAND WOULD NOT CLOSE. N1 TOPPED UP AND TORQUE STAYS LOW. REPLACED BLEED BAND ACTUATOR WOULD NOT SOLVE PROBLEM. PROBLEM WAS FIXED WITH REPLACEMENT OF FUEL REGULATOR. (X)

BELL 205A1	LYC T5313B	SWITCH 8G506	FAILED FUEL PRESS SW	05/11/2000 2000112300057	
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(CAN) FUEL PUMP CAUTION LIGHT ILLUMINATED AFTER REPLACING FUEL REGULATOR. REPLACED PRESS SWITCH. CHECKED THIS SWITCH. CIRCUIT WAS CLOSED WITH PRESSURE. (X)

BELL 206B	ALLSN 250C20	BENDIX 252464429	SCREW 78315	SHEARED FUEL CONTROL	06/01/2000 2000120100156
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(CAN) THE SCREW HEAD RETAINING THE FUEL CONTROL UNIT RATIO LEVER COVER (FUEL SIDE) SEPARATED IN-FLIGHT ALLOWING FUEL TO LEAK INTO THE ENGINE COMPARTMENT UNDER HIGH PRESSURE AND REDUCE THE FUEL FLOW TO THE ENGINE TO THE POINT WHERE CONTINUED FLIGHT WAS NOT POSSIBLE. THE HELICOPTER CRASHED AND BURNED WHILE ATTEMPTING AN AUTOROTATIONAL LANDING (TSB REPORT A00W0105) RESULTING IN THE DEATH OF THE PILOT. EXAMINATION OF THE FRACTURED SCREW HEAD AT THE TSB LAB (PROJECT LP 72/00) DETERMINED THE FRACTURE WAS THE RESULT OF THE HEC. IT WAS ALSO DETERMINED THE SCREW MATERIAL AND MARKINGS DID NOT MEET THE MANUFACTURER'S SPECIFICATIONS PLACING THE SCREW IN THE CATEGORY OF A

BELL 206B	ALLSN 250C20B	MOUNT 206030446001F	FAILED T/R GEARBOX	10/20/2000 2000113000277	
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(CAN) CRACK RADIATING ACROSS REAR PORT SIDE ATTACHMENT HOLE FOR THE TAIL ROTOR GEARBOX STUDS. (X)

BELL 206B3	ALLSN 250C20B	DRIVE SHAFT 206040015103	FAILED ENGINE/TRANS	01/06/2000 2000112900028	599
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(AUS) ENGINE TO TRANSMISSION DRIVE SHAFT FAILED AND SEPARATED AT THE TRANSMISSION END. SUSPECT ATTACHMENT NUTS PN MS21043-4 HAD NOT BEEN CORRECTLY RETORQUED (LEFT FINGER TIGHT) FOLLOWING SERVICING AND GREASING OF THE SHAFT APPROXIMATELY ONE HOUR PREVIOUSLY. TWO OF THE NUTS WERE FOUND

BELL 206L	ALLSN 250C20B	BELL 206033004NA	SUPPORT 206031418007	BROKEN VERTICAL FIN	08/25/2000 2000112900129	9918
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(CAN) DURING A DAILY INSPECTION CHECK, TWO BREAKS WERE FOUND IN THE UPPER MAIN ATTACHMENT POINT FOR THE VERTICAL FIN REAR SUPPORT. THE BROKEN PIECE IS APPROXIMATELY 1 INCH BY 1 INCH IN SIZE. (X)

BELL 212	PWA PT6T3	SOLENOID A2802	LEAKING FUEL SUMP	09/09/2000 2000113000276	
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(CAN) WHILE THE FUEL SUMPS WERE BEING DRAINED IN PREPARATION FOR FLIGHT, IT WAS NOTED THAT THE LEFT FUEL SUMP WAS LEAKING. THE SUMP SOLENOID WAS RECYCLED AND FUEL LEAK STOPPED. WITH SIMPLEX SPRAY SYSTEM FUEL DRAIN SOLENOID IS INACCESSIBLE. THE SOLENOID DRAIN VALVE P/N A280-2 REPL. DRAIN VALVE DISASSEMBLED TO TRY AND LOCATE CAUSE FOR FUEL LEAK. UPON EXAMINING DISASSEMBLED VALVE, IT FOUND TO CONTAIN 3 PIECES OF SAND IN VALVE. SUBMITTER SUSPECTED THAT PIECE OF SAND OR OTHER FOREIGN MATTER PREVENTED SEALING SURFACES ON VALVE FROM SEALING PROPERLY. SHOULD BE ISOLATED INCIDENT AT THIS PARTICULAR OPERATION. IF, UPON CONDUCTING SUMP DRAIN, FUEL CONTINUES TO LEAK, RECYCLE DRAIN

BELL 407	BELL	BLADE 406016100119	FOD TAIL ROTOR	10/09/2000 2000112900012	
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(AUS) TAIL ROTOR BLADE DAMAGED BY DZUS FASTENER WHICH SEPARATED FROM THE TAIL ROTOR GEARBOX COWLING. FOD. (X)

BELL 412	PWA PT6T3B	BELL	TRANSMISSION 412040002103	FAULTY M/R GEARBOX	08/21/2000 2000112300060	3919
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(AUS) MAIN TRANSMISSION CHIP DETECTOR CONTAMINATED WITH METAL. FOLLOWING INSPECTION AND GROUND RUN, THE CHIP DETECTOR AGAIN ILLUMINATED. (X)

BLANCA 1730A	CONT IO520K	SOLENOID	FAILED	08/02/2000 2000111600246	
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PRIOR TO TAKEOFF ON ENGINE RUN-UP, AIRCRAFT LOST ALL ELECTRICAL POWER, STARTER SOLENOID STAYED ENGAGED. THE ENGINE RAN THE STARTER, CAUSED A REVERSE CURRENT FLOW TO THE BATTERY. BATTERY FAILED, SMOKE FROM UNDER THE COWLING. STARTER SOLENOID LOCATED ON THE FIRE WALL. SUBMITTER STATED AIRCRAFT IS FABRIC COVERED. THERE WAS NO DAMAGE IN THE ENGINE AREA. (X)

BOLKMS BK117B1	LYC LTS101750B1	LYC	FUEL CONTROL 430128307	INOPERATIVE ENGINE	10/05/2000 2000112900199	2364
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(CAN) DURING TEST FLIGHT FOR NR 1 ENGINE AIRFLOW MODULATOR REPLACEMENT, IT WAS DISCOVERED THAT THE NR 2 ENGINE WAS N1 LIMITED CAUSING LOW POWER. (X)

BOLKMS BO105C	ALLSN 250C20B	BOLT LN93556X32	FAILED COLLECTIVE	10/17/2000 2000113000334	
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(CAN) DURING CRUISE FLIGHT, PILOT WAS ONLY ABLE TO ACHIEVE 98 PERCENT N2 ON NR 1 ENGINE. UPON LANDING AT THE MAINTENANCE FACILITY, AN INSPECTION FOUND THE NR 1 ENGINE GOVERNOR CABLE WHERE IT ATTACHES TO THE COLLECTIVE FORK HAD BECOME DISENGAGED. REF: MBB PARTS BOOK FIG 621 ITEM NR 40 CONNECTION FIGURE 438 ITEMS, NR 440 BOLT, NR 60 FORK LEVER, AND NR 110 ANCHOR NUT. BOLT NR 440 HAD BACKED OUT OF THE ANCHOR NUT NR 110 AND ALLOWED THE CABLE TO COME FREE OF THE COLLECTIVE FORK NR 60. THE BOLT AND N2 CABLE WERE RE-ASSEMBLED AND FUNCTIONAL CHECK COMPLETED ON THE GOVERNOR/RIGGING ALL SYSTEMS FOUND SERVICEABLE. THE AIRCRAFT WAS THEN RETURNED TO SERVICE. (X)

CESSNA 150F	CONT O200A	FILLER	CONTAMINATED FUEL STORAGE	09/04/2000 2000120700023	
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(AUS) FUEL TANK FILLER NECK CONTAMINATED WITH WASP NEST. (X)

CESSNA 150F	CONT O200A	PITOT LINE	LEAKING PITOT/STATIC SYS	09/04/2000 2000120700028	
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(AUS) PITOT/STATIC SYSTEM FAILED LEAK TEST. INVESTIGATION FOUND THE PITOT SYSTEM CONNECTOR LOCATED AT THE LEFT WING BREAK WAS CROSS-THREADED AND ONLY HOLDING BY ONE TURN. THE STATIC SYSTEM HAD BEEN REWORKED TO ACCOMMODATE THE ENCODED. THE EXISTING PLUMBING HAD BEEN CUT AND LARGER PLASTIC TUBING SLIPPED OVER IT TO FIT THE BRASS TEE. UNAPPROVED PART. (X)

CESSNA	CONT	CLEVELAND	SEAL	DAMAGED	09/04/2000	
150F	O200A	CFP4097	15315	WHEEL/SKI/FLOAT	2000120700032	
(AUS) WHEEL BEARING SEALS DAMAGED AND/OR FELT MISSING. WHEEL NUT SPLIT PIN TAILS NOT BENT OVER. (X)						
CESSNA	CONT		SEAT	SEIZED	09/04/2000	
150F	O200A			FLIGHT COMPART	2000120700035	
(AUS) PILOT AND COPILOT SEAT ROLLERS SEIZED. COPILOT'S SEAT RELEASE ROD BENT AND FOULING ON THE STRUCTURE BENEATH THE SEAT PREVENTING THE SEAT FROM LOCKING. PILOT'S SEAT LEFT SEAT RAIL CRACKED AT INBOARD FORWARD ATTACHMENT SKIN. (X)						
CESSNA			STABILIZER	CRACKED	06/19/2000	1500
150J				INBOARD	2000112900001	
BOTH STABILIZER SPARS FOUND CRACKED IN THE UPPER BEND RADIUS FOR THE FLANGE AT THE INBOARD PAD ABOUT 2 INCHES FROM THE PADS. THIS AREA IS CONCEALED UNDER STIFFENER 0432001-15 (ALSO CRACKED). THIS WAS DISCOVERED DURING INSPECTION FOR AD 80-11-04, ALSO SPAR REINFORCEMENT, PN 0432001-15, WAS CRACKED. (X)						
CESSNA	CONT		HOSE	MISINSTALLED	10/06/2000	
150L	O200A				2000111700114	
INTAKE BOOT SLID OFF INTAKE TUBE, MOST LIKELY CAUSED BY IMPROPER POSITIONING OF WORM GEAR HOSE CLAMP. THIS CAUSED EXCESSIVE LEAN MIXTURE. THE RESULT WAS PISTON FAILURE, WRIST PIN FAILURE, AND						
CESSNA	CONT	CESSNA	SPINNER	CRACKED	08/10/2000	
150M	O200*				2000113000005	
SPINNER BACKING PLATE HAS CRACKS RADIATING FROM THE BOLT HOLE AREAS. AN UNAUTHORIZED REPAIR WAS MADE. THE REPAIR WAS MADE BY MAKING A CIRCULAR FLAT SHEET METAL SAME THICKNESS AS THE ORIGINAL MATERIAL, THEN RIVETED TO THE BACKING PLATE. BOLT HOLES WERE DRILLED AT THE CORRECT LOCATION. IT WAS NOT CONCENTRICALLY ROUND AND IT WAS NOT CENTERED TO THE BACKING PLATE. THE PLATE WAS OUT OF BALANCE. AFTER A NEW ONE WAS INSTALLED, THE OWNER REPORTS A MUCH SMOOTHER ENGINE-PROPELLER PERFORMANCE. PART TIME UNKNOWN. OWNER INDICATES THAT ANOTHER 150 IS FLYING WITH CESSNA LYC						
08/22/2000	1356			PUMP		FAILED
172L	O320E2D			ENG REAR ACCY	2000120100121	
(CAN) PUMP FAILED ABOUT HALF WAY DURING 1.7 HOURS FLIGHT TG3 TO CYXK. ALTERNATOR FAILURE FOLLOWED. ALTHOUGH PUMP TURNED FREE BY HAND, BROKEN NYLON DRIVE SHOWED SIGNS OF PRE-FAILURE DETERIORATION. PUMP HAD 1356.1 HOURS, WAS INSTALLED NEW 7 APRIL 1977, CHECKED OK AT TSN: 1046.9 HOURS AT ENGINE OVERHAUL ON 21 MAR. 1996. AIRCRAFT FLOWN 309.2 HOURS IN LAST 4 YEARS AND 5 MONTHS. AVERAGE OF 70.11 HOURS A YEAR. HANGARED 95 PERCENT OF TIME ON GROUND. PRIVATE OWNED. REPLACED PUMP - NEW.						
CESSNA	LYC	CESSNA	HORN	WORN	09/02/2000	10560
172M	O320E2D	053100681	05310081	STOP BOLT	2000112100115	
(CAN) RUDDER WAS ALLOWED TO MOVE BEYOND TRAVEL LIMITS DUE TO WORN HORN P/N 0531008-1. HORN WAS REPLACED WITH NEW FACTORY PART AND NEW RUDDER STOP NUT P/N MS21042L5 AND BOLT AN5-5A. RUDDER CHECKED FOR TRAVEL AND SAFETY. (X)						
CESSNA	LYC		VALVE	MISSING	08/25/2000	3953
172N	O320H2AD			ENG SUMP DRAIN	2000111600247	557
THE AIRCRAFT WAS FLYING FROM TULSA TO SILOAM SPRINGS AND 8 MILES FROM SILOAM SPRINGS AIRPORT, PILOT REPORTED THE ENGINE OIL PRESSURE WAS FLUCTUATING FROM ZERO TO 60 PSI. THE ENGINE THEN STARTED TO VIBRATE SEVERELY BEFORE THE ENGINE COMPLETELY STOPPED. UPON INSPECTION OF AIRCRAFT, FOUND THE OIL QUICK DRAIN WAS MISSING WHICH OBVIOUSLY CAUSED THE ENGINE TO LOSE OIL PRESSURE. THE QUICK DRAIN INSTALLED DID NOT HAVE A PROVISION FOR SAFETY WIRE. SUBMITTER RECOMMENDED TO PREVENT FUTURE PROBLEM WOULD BE TO CHANGE ALL PMA QUICK DRAINS TO BE REQUIRED TO HAVE A SAFETY HOLE IN THE VALVE.						
CESSNA			IGNITION	STUCK	10/10/2000	1843
172S			C2925010109		2000120800009	
PILOT SQUAWK: IGNITION KEY STICKS IN OFF POSITION. MAINTENANCE REMOVED IGNITION SWITCH AND FOUND BURNED CONTACTS. THIS IS THE SAME SWITCH COVERED BY AD 83-05-06. HOWEVER, THE 172S MODEL IS NOT INCLUDED IN THE AD LIST. SUBMITTER STATED THE 172R'S MODEL AIRCRAFT SHOULD BE INCLUDED IN AD. ACS KIT NR A3600 INSTALLED. OPERATIONAL CHECK GOOD. AIRCRAFT RELEASED. (X)						
CESSNA			TRANSMITTER	DEFECTIVE	07/27/2000	768
172S			S33312	LT FUEL CELL	2000113000013	
LEFT FUEL QUANTITY WENT TO EMPTY AND LT LOW FUEL ANNUNCIATOR LIGHT ILLUMINATED IN-FLIGHT. MAINT FOUND THE FUEL QUANTITY TRANSMITTER INOPERATIVE. WHEN THE XMITTER WAS REMOVED FROM FUEL CELL, THE FLOAT WAS MISSING ALONG WITH THE RETAINER WASHER ON THE OTBD END OF THE FLOAT ARM. THE FUEL CELL WAS OPENED AND THE FLOAT AND WASHER RETRIEVED. FUEL QTY XMITTER MFG INCORRECTLY, THE WIRE ARM THAT RUNS THROUGH THE FLOAT WAS NOT CRIMPED ON EITHER SIDE OF THE FLOAT DURING MFG ALLOWING IT TO FALL OFF THE ARM. ALSO FOUND LT AND RT FUEL QTY XMITTERS INSTALLED BACKWARDS IAW CESSNA C-172R/S PARTS MANUAL. S331-2 TRANSMITTER IS REQUIRED TO BE INSTALLED IN THE RT FUEL CELL AND S331-1 XMITTER IN						
CESSNA	LYC		SERVO	FAILED	09/28/2000	824
172S	IO360L2A		25765362		2000111600251	
ENGINE RSA-5AD1 FUEL SERVO WILL NOT MEET SPECIFICATIONS. FUEL FLOW BELOW 1700 RPM IS TOO HIGH, AT IDLE RPM IS ERRATIC, AND THE IDLE SPEED AND IDLE MIXTURE CANNOT BE SET TO SPECIFICATION WITH SATISFACTORY ENGINE OPERATION. FUEL SERVO REMOVED, SENT FOR REPAIR. MAJOR REPAIRS ACCOMPLISHED AND SERVO REFLOWED TO PRECISION FLOW SHEET 30075-02 DATED 1-5-00. REINSTALLED FUEL SERVO, ADJUSTED IAW SPECS, OPERATIONAL CHECKED SATISFACTORY. SUBMITTER RECOMMENDED ANY RSA-5AD1 FUEL SERVO NOT FLOWED TO PRECISION FLOW SHEET 30075-02, BE REMOVED IMMEDIATELY AND SENT TO APPLICABLE REPAIR STATION FOR						

CESSNA 180H	CONT O470R		PULLEY 0512128	BROKEN UNDER FLOOR	09/11/2000 2000120100133	5742
(CAN) A BROKEN FLAP CONTROL CABLE PULLEY BRACKET CAUSED THE RIGHT FLAP EXTEND CABLE TO GO SLACK, RESULTING IN THE RIGHT FLAP PANEL PARTIALLY RETRACTING. THE AIRCRAFT EXPERIENCED AN UNCOMMANDED ROLL TO THE RIGHT AND THE PILOT HAD TO RETRACT THE FLAPS TO RECOVER A LEVEL FLIGHT ATTITUDE. THE PILOT THEN CARRIED OUT AN UNEVENTFUL FLAPLESS LANDING. (X)						
CESSNA 182Q	CONT O470U	CONT	MOUNT 539914	BROKEN ENGINE MOUNT	10/12/2000 2000120100011	
(AUS) RIGHT SIDE ENGINE MOUNTS BROKEN. AIRCRAFT WAS BEING HAND STARTED AND RAN AWAY FROM THE PILOT BEFORE HITTING A FENCE. THE PROPELLER HIT THE FENCE AND STALLED THE ENGINE. (X)						
CESSNA 182S			PROPELLER	LEAKING OIL SERVICE PLUG	08/14/2000 2000112100054	106
PILOT/OWNER REPORTED OIL ON PROPELLER BLADES, WINDSHIELD. INSPECTION OF PROPELLER HUB FOUND RED DYE LEAKING FROM HUB SERVICE PLUG. SUBMITTER STATED THIS IS THE SECOND 182S MCCAULEY PROPELLER WITH A LEAK FROM PLUG. ALSO, A CESSNA 206H MCCAULEY PROPELLER WAS NOTED AND REPAIRED. ALL AIRCRAFT HAD LESS THAN 160.0 HOURS SINCE NEW. NO GUIDE LINES HAVE BEEN ESTABLISHED FOR THIS PROP IN REGARDS TO ACCEPTABLE STANDARDS FOR RETURN TO SERVICE CRITERIA. (X)						
CESSNA 206H	LYC IO540AC1A5		SUPPORT 31M22045	INCORRECT POWERPLANT	07/14/2000 2000111600065	498
DURING ROUTINE INSPECTION, FOUND THE ALTERNATOR BELT DRIVE SUPPORT MISALIGNED WITH THE ALTERNATOR PULLEY CAUSING THE BELT TO SLIP PARTIALLY OFF OF THE ALTERNATOR PULLEY. FURTHER INVESTIGATION DETERMINED THE INCORRECT STARTER RING GEAR SUPPORT, PN 31M22045, WAS INSTALLED WHICH POSITIONED THE BELT SUPPORT FWD OF THE ALTERNATOR DRIVE PULLEY. SUBMITTER STATED THE INCORRECT PART WAS INSTALLED AT THE FACTORY DURING PRODUCTION. (X)						
CESSNA 208			PUMP 9148D27	LEAKING EMER	07/14/2000 2000111600066	87
EMERGENCY GEAR HAND PUMP SEEPING HYDRAULIC FLUID. DETERMINED METAL SHAVINGS PRODUCED DURING ACTUATOR PRODUCTION HAD LODGED UNDER AN O-RING. NO GALLING OR DAMAGE WAS FOUND INSIDE THE ACTUATOR. DEBRIS REMOVED AND NEW SEALS INSTALLED. (X)						
CESSNA 310L	CONT IO470V	CESSNA 08134551	RACK	CHAFED TOP SUPRT	08/30/2000 2000120700021	6471
(CAN) UPON PERFORMING FLAIR DURING LANDING, THE PILOTS NOTICED THE ELEVATOR CONTROLS WERE FEELING A LITTLE STIFF. UPON MAINTENANCE INVESTIGATION, FOUND THE RADIO IN THE CENTER INSTRUMENT PANEL (RADIO RACK) WERE SETTING DOWN AND MAKING CONTACT WITH THE CONTROL YOKE. FORWARD RADIO RACK SUPPORT WAS REPAIRED, RADIO RACK WAS ADJUSTED TO PROVIDE ADEQUATE CLEARANCE. CONTROLS MOVED TO EXTREMES,						
CESSNA 310R	CONT IO520MB		TORQUE TUBE 504501033	BROKEN TORQUE TUBE	12/29/1999 2000120100067	
(CAN) PILOT COULD NOT GET A GREEN LIGHT INDICATION ON THE LEFT MAIN GEAR. PILOT MADE A SUCCESSFUL LANDING WITHOUT ANY DAMAGE TO THE AIRCRAFT. AIRCRAFT WAS PUT ON JACKS IN THE HANGAR AND TORQUE TUBE WAS FOUND TO BE BROKEN. NEW TORQUE TUBE WAS INSTALLED AND GEAR SWING WAS COMPLETED. COULD NOT DETERMINE WHY THE PART HAD BROKEN AS EVERYTHING WAS WORKING CORRECTLY. (X)						
CESSNA 337			NUT	LOOSE PROPELLER	10/17/2000 2000111700121	
THE REAR PROPELLER WAS SUBMITTED FOR REPAIR OF A LOOSE BLADE FOUND DURING AN ANNUAL INSPECTION. UPON DISASSEMBLY, FOUND THE RED DYE OIL REQUIRED BY AD 91-15-04 HAD BEEN REMOVED AND THE PROPELLER WAS HAND PACKED WITH GREASE. THE LOOSE BLADE CONTAINED A CRACKED BLADE RETENTION NUT, AND THE BLADE BEARING HAD FAILED ALLOWING THE STEEL ROLLERS END BEARING SPACER TO ROLL LOOSE IN THE HUB. (X)						
CESSNA 402B			CABLE 50000084	BROKEN FLAP SYSTEM	09/13/2000 2000120800090	10
CPS/LIT - WHILE ON FINAL, THE FLAP SYSTEM FAILED. IT WAS DETERMINED THE UPPER FLAP EXTEND CABLE ON THE RIGHT SIDE HAD BROKEN APPROXIMATELY A FOOT OUTBOARD OF THE ACTUATOR CHAIN ATTACH POINT. THE CABLE COULD HAVE BEEN INCORRECTLY ROUTED/RIGGED AND/OR THE CABLE TENSION COULD HAVE BEEN INCORRECTLY SET. THE CABLE WAS REPLACED ABOUT 10 HOURS PRIOR TO FAILURE. (X)						
CESSNA 414	CONT TSIO520NB	CONT	FUEL LINE	CHAFED MIDWAY BTWN	08/31/2000 2000120700013	
(CAN) DURING GROUND HANDLING FUEL LEAK ON LT ENGINE WAS OBSERVED. FURTHER INVESTIGATION REVEALED THAT FUEL LINE BETWEEN FCU AND FUEL LIMITER WAS CHAFED THROUGH. TEMPORARY REPAIR TO FLY AIRCRAFT BACK TO HOME BASE. AT HOME BASE FUEL LINE REPLACED BY NEW AND AIRCRAFT RETURNED TO SERVICE. ASSUMED REASON FOR DAMAGE: DISLOCATION DUE TO BROKEN BRACKET ON FUELLIMITER (REPLACED AS WELL), RESULTING IN CHAFING CONTACT WITH AIR BOX. (X)						
CESSNA 414A			FITTING 50110231	CORRODED AFT WING ATTACH	08/01/2000 2000111600067	5076
EXTENSIVE INTERGRANULAR CORROSION FOUND ON THE BOTTOM OF THE UPPER AFT WING ATTACH FITTING ON THE LEFT WING. THE SAME FITTING ON THE RIGHT WING STUB WAS CORRODED TO A LESSER DEGREE. MOISTURE ENTRAPMENT IS BELIEVED TO CONTRIBUTE. (X)						
CESSNA 414A	CONT TSIO520N		BEARING 51310103	CORRODED RUDDER	08/30/2000 2000120800149	
(AUS) LOWER RUDDER HINGE BEARING PLATE CORRODED. UPON REMOVAL, THE BEARING PLATE WAS FOUND TO HAVE BEEN INSTALLED UPSIDE DOWN. THE BEARING PLATE APPEARED TO BE ORIGINAL FITMENT. (X)						

CESSNA		RIB	CRACKED	10/30/2000	4375
441		57222082	LT WING	2000111700112	

DURING A PHASE INSPECTION, FOUND A 1.1 INCH CRACK IN LEFT WING CANTED RIB. CRACK STARTING AFT OF THE FORWARD SPAR AND EXTENDED AFT ALONG THE RIB RADIUS. SUBMITTER STATED CESSNA NO LONGER WILL ALLOW STOP DRILLING OF THIS CRACK, SO THE RIB WAS REPLACED. (X)

CESSNA		STRINGER	CORRODED	10/19/2000	7566
550			AILERON BELLCK	2000111700118	

WHILE INVESTIGATING A PROBLEM OF FUEL IN THE CABIN, AN AREA OF SEVERE CORROSION WAS FOUND. THE CORROSION WAS LOCATED IN A STRINGER UNDER THE AILERON BELLCRANK UNDER THE AFT CABIN FLOOR. THE CORRODED STRINGER IS IN THE SAME LOCATION OF A SIMILARLY CORRODED STRINGER FOUND ON AN S550 AIRCRAFT, 5500024. SUBMITTER STATED IT SHOULD BE NOTED THE AREA IN QUESTION IS NOT EASILY SEEN. (X)

CESSNA	PWA	CESSNA	FUEL TANK	LEAKING	09/12/2000
550	JT15D4	550	5500347	FUEL STORAGE	2000112200072

(AUS) LEFT WING INBOARD HEATED LEADING EDGE ANTI-ICE PANEL ATTACHMENT SCREW HOLES LEAKING FUEL FROM TANKS. FUEL TANK ALSO LEAKING IN AREA BEHIND ANTI-ICE PANEL. (X)

CESSNA	CONT		POST	CRACKED	09/28/2000
U206G	IO520F			FUSELAGE MAIN BU	

2000120100013

(AUS) FUSELAGE RIGHT FORWARD LOWER DOOR POST BULKHEAD CRACKED AT RELIEF HOLE PER AD/CESSNA206/48 AMDT1. CRACK LENGTH 8.2 MM (0.325 INCH). AD/CESSNA206/48 AMDT1 WAS NOT DUE FOR ANOTHER 120 HOURS. (X)

CHRIS		HORN	MISALIGNED	07/12/2000	390
A1		35274001	TAIL OF FUSELAGE		

2000113000019

P/N 50025 (AN3-5) BOLT AND P/N 53875 (AN 1115-21), CLEVIS ATTACHED TO THE ELEVATOR TRIM HORN LINE, P/N 3-5274-001, CHAFED ON TAIL STRUCTURE TUBING. THE LINK SHOULD HAVE A JOGGLE BUILT IN TO DEFLECT THE TRIM CABLE INBOARD FOR CLEARANCE. ANTI-CHAFE TAPE WAS APPLIED. SUBMITTER STATED PER PHONE CALL TO AVIAT FACTORY, HORN LINK WAS BENT INWARD TO CLEAR FUSELAGE TUBING. (X)

DIAMON	CONT	SLICK	ROTOR SHAFT	SHEARED	10/19/2000	400
DA20C1	IO240B	4309		MAGNET & SEAL	2000120500193	

(CAN) PLANE HAD BEEN SNAGGED FOR A 200 RPM DROP ON RT MAGNETO. MAGNETO WAS PULLED FOR INSPECTION, FOUND THE ROTOR SHAFT TO BE SHEARED. A NEW MAGNETO HAS BEEN RE-INSTALLED. (X)

ENSTRM	RROYCE	RROYCE	REGULATOR	FAILED	08/08/2000	
F28ENSTRM	SPEY55515P		CASC211	FUEL FLOW REG	2000112300064	2562

(CAN) AFTER TAKEOFF, THE FLIGHT CREW WAS UNABLE TO THROTTLE BACK THE ENGINE. THEY SUBSEQUENTLY SHUT THE ENGINE DOWN AND RETURNED TO FIELD. REPLACEMENT OF FUEL FLOW REGULATOR CORRECTED THE PROBLEM. DEFECTIVE FFR UNDER INVESTIGATION AT RRC. (X)

HUGHES	LYC		BEARING	MISINSTALLED	08/10/2000	
269B	HIO360A1A		269A505073	M/R GEARBOX	2000112900154	384

(AUS) MAIN ROTOR DRIVE SHAFT THRUST BEARING WAS INCORRECTLY INSTALLED. DISCREPANCY WAS FOUND DURING INSPECTION IAW AD HU269/28 AMDT3. (X)

MOONEY		MOONEY	HINGE	BROKEN	10/23/2000	9255
M20J			210104	RT WING INBD HNG	2000120800005	

DURING A PRE-FLIGHT INSPECTION, AN INSTRUCTOR NOTICED THE RIGHT FLAP HAD PLAY OR EXCESSIVE TRAVEL WITH FLAPS DOWN. UPON INSPECTION, THE HINGE, P/N 210104-000, WAS FOUND BROKEN JUST BELOW THE AFT HINGE (BOLT). THE BREAK APPEARED TO BE A FRESH BREAK. (X)

MOONEY	CONT		VERNATHERM	BENT	10/17/2000	1088
M20K	TSIO360MB		639305	OIL TEMP VALVE	2000111700120	

RETAINING NUT ROLL PIN TO SECURE THE NUT. THE SHAFT ON WHICH THE NUT IS INSTALLED WAS BENT JUST BEHIND THE NUT. SUBMITTER HAS SEEN SEVERAL NOW WITH THIS CONDITION AND THEY ARE ALL FROM FACTORY REMAINS OR NEW ENGINES FROM RECENT YEARS. THIS ONE REBUILT 2-8-95. THE BEND IS IN THE DIRECTION OF THE ROLL PIN. IT COULD BE CAUSED AT MANUFACTURE WHEN THE PIN IS INSTALLED. IT APPEARED THE END OF THE BRASS SHAFT WAS MACHINED. IT COULD OCCUR AT THAT TIME, IF SHAFT IS NOT SUPPORTED. SUBMITTER HAS

PAC	CONT	CONT	O-RING	WRONG PART	09/27/2000	
CT4A	IO360HB	6405632		FUEL	2000112200073	175

(AUS) THROTTLE METERING PLATE O RING SEAL NOT USED IN THIS LOCATION. NO REFERENCE TO THIS O RING IN THE PARTS CATALOGUE. UNAPPROVED PART. (X)

PARTEN	LYC	LYC	PIPE	WORN	08/12/2000
P68B	IO360A1B6			ENGINE OIL PRESS	2000120800152

(AUS) ENGINE OIL PRESSURE LINE LOCATED BEHIND INSTRUMENT PANEL WORN BY OPILOT ASHTRAY. OIL LEAKING.

PIPER			CYLINDER	CRACKED	08/09/2000	11100
PA28151			65319004	LINK ATTACH,	2000113000027	

DURING OTHER MAINTENANCE TO LANDING GEAR, THE TORQUE LINKS WERE REMOVED AND UPPER STRUT CYLINDER CLEANED. CRACKS WERE FOUND AT THE BOTTOM OF THE MACHINED AREA FOR THE TORQUE LINK ATTACHMENT BOTH SIDES. SUBMITTER SUSPECTED AGE IN HOURS AND NUMBER OF LANDINGS AS CAUSE. (X)

PIPER			TRUNNION	CRACKED	07/17/2000
PA28R180			6773500V	LH WEB AREA	2000112900115

DURING ANNUAL INSPECTION, FOUND LEFT MAIN GEAR TRUNNION, P/N 67735-00V, CRACKED THROUGH WEB AREA AND INTO CASTING APPROX .75 INCH. PIPER SL 616 ALLOWS FOR THE EXISTING .191 INCH HOLE TO BE ENLARGED TO .500 INCH IN DIAMETER TO REMOVE CRACKED AREA, BUT THIS CRACK HAD ALREADY EXTENDED TOO FAR UP INTO THE CASTING. REPLACED WITH A SERVICEABLE, NEW STYLE TRUNNION WHICH INCORPORATES A MUCH THICKER WEB. AIRCRAFT TT: 3,352 HOURS. (X)

PIPER MOUNT BROKEN 10/27/2000
PA28R200 6711949 ENGINE MOUNT 2000120800003
DURING THE COURSE OF A 100 HR INSPECTION, MAINTENANCE DISCOVERED THE ENGINE MOUNT, P/N 67119-49, COMPLETELY BROKEN AT THE TOP RIGHT HAND SIDE OF THE COMPONENT. THIS WAS NOT SIMPLY A CRACK, BUT RATHER, THE TUBE WAS COMPLETELY BROKEN THROUGH. THIS FAILURE IS THE SUBJECT OF PIPER SERVICE LETTER 568. THE NATURE OF THIS FAILURE IS SUCH THAT IT COULD LEAD TO SEPARATION OF THE ENGINE AND SUBSEQUENT LOSS OF CONTROL OF THE AIRCRAFT. A SEARCH OF THE SDR DATABASE REVEALED THAT SEVEN OTHER FAILURES ARE ON RECORD FOR THIS SAME PART NUMBER. SUBMITTER RECOMMENDS THESE MOUNTS BE CLOSELY INSPECTED AT EACH 100 HOURS AS STIPULATED BY THE SERVICE LETTER. FOR A COPY OF THIS SERVICE LETTER, CONTACT THE NEW

PIPER CABLE FRAYED 09/29/2000
PA31 41734078 NEAR TRIM SERVO 2000112100113
(CAN) UPON ROUTINE INSPECTION OF ELEVATOR TRIM SYSTEM, AFT TRIM CABLE FOUND FRAYED AND WITH BROKEN STRANDS. DAMAGE TO CABLE BELIEVED TO BE CAUSED BY SHARP BENDS AND HIGH FREQUENCY OF MOVEMENT USING ELECTRIC TRIM SERVO. (X)

PIPER LYC CLEVELAND TIRE DEFECTIVE 10/03/2000 29
PA31 TIO540A2B 40140 613160 NOSE WHEEL 2000120500186
(CAN) AT REPLACEMENT: NEW BEARINGS AND CUPS AND AXLE CHECKED. NEXT FLIGHTS PILOT REPORTED SHIMMING. SHIMMY DAMPENED IN FLUID, RESERVICED. FURTHER ON PILOT PRECISED - NOT SHIMMING BUT SAID THE NOSE WHEEL SKIPPING ON TAKEOFF AS SPEED INCREASED. AIRCRAFT ON JACKS: CALIPERED TIRE TO LANDING GEAR FORK, NOT ROUND. INSTALLED NEW TIRE. PILOT REPORTS NOW OK. NOTE: NO FLAT SPOTS, NO BULGES ON DEFECTIVE TIRE. TIRE, MICHELIN-AVIATOR 6.00X6PR TT. (X)

PIPER TRUNNION CRACKED 06/09/2000
PA31350 4032700 2000113000008
THE MAIN LANDING GEAR TRUNNION WAS BROUGHT TO THIS STATION FOR INSPECTION AND POSSIBLE REPAIR. THE TRUNNION HAD DEVELOPED A CRACK ALONG THE BARREL AND NEXT TO THE FORGING SEAM. THE OWNER OF THIS TRUNNION HAD TAKEN IT TO A LOCAL WELDING SHOP AND HAD IT WELDED. WELDING SHOP HAD NO APPROVED DATA TO PERFORM ANY WELDING ON THIS COMPONENT, THEREFORE, THE COMPONENT WAS REJECTED. IN ADDITION, REPAIRS WERE ACCOMPLISHED BY AN UNAUTHORIZED FACILITY. (X)

PIPER LYC CAMSHAFT FAILED 10/10/2000 535
PA31350 LTIO540J2BD LW19341 NR 1&2 2000120800006
STEEL WAS FOUND IN BOTH SPIN-ON FILTER AND OIL SUCTION SCREENS. CAMSHAFT SUSPECTED FAILING, AND PROVEN WITH VISUAL INSPECTION AND CHECKING THE LIFT OF ALL OF THE LOBES. NR 1 AND NR 2 LOBES WERE ONLY GIVING HALF THE LIFT FROM THE OTHER LOBES. (X)

PIPER LYC LYC BOLT LOOSE 08/14/2000
PA31350 LTIO540J2BD LW18302 LW31S444 LWR OTBD 2000120100125 481
(CAN) OUTBOARD TURBO MOUNT LOWER BOLT TO ENGINE DYNAFOCAL MOUNT BRACKET WAS FOUND LOOSE (HAND LOOSE) WITH PLAY IN MOUNT. HOWEVER, CUTTER PIN WAS INSTALLED. NO WASHER P/N STD 2197 BETWEEN NUT P/N STD 1420 AND FACE OF BOSS ON MOUNT P/N LW-18302 (SUPPORT ASSY) ON BOLT P/N LW-31S4.44. NO TORQUE ON NUT AND BOLT ASSY. CAUGHT IN TIME, NO SIGNIFICANT FRETTING ON SUPPORT BOSS OR ON DYNAFOCAL MOUNT

PIPER LYC LYC GASKET ERODED 06/07/2000 734
PA31350 TIO540J2BD 13388 ACCESSORY CASE
2000112900113 367
GASKET UNDER OIL FILTER CONNECTOR PLATE FAILED RESULTING IN LARGE OIL LEAK AND ENGINE FIRE. UPON REMOVAL, GASKET APPEARED TO HAVE UNUSUALLY SOFT CONSISTENCY AND EXTENDED BEYOND NORMAL DIMENSIONS. REPLACED WITH NEW. (X)

PIPER LYC PIPER CHANNEL CRACKED 10/30/2000 12856
PA31350 TIO540J2BD 5423224 40060 BETWEEN RIBS 2000120500196
(CAN) CRACKS FOUND WHEN TEARING DOWN ELEVATOR TO PERFORM INSTALLATION OF KIT 766-642 PER SB 1008 - BUTT RIB REPLACEMENT. SB 998A RELACEMENT OF SPAR ALSO CARRIED OUT TO COMPLY WITH AD 99-12-05. NOTE: NEW CHANNEL COMES IN KIT 766-642. THESE CRACKS COULD NOT HAVE BEEN DETECTED IN SB 998A AND SB 1008 INSPECTION PROCEDURE AS CHANNEL IS CLOSED IN. SUBMITTER STATED TO SEE THAT AREA, AN INSPECTION HOLE AND BLANKING PLUG WOULD BE REQUIRED SUCH AS IN SB 998A, BUT LOCATED SOMEWHERE BETWEEN THE RIBS AS

PIPER B-NUT LOOSE 06/01/2000
PA32R301 RT GEAR 2000112900017
GEAR WOULD NOT EXTEND. CIRCUIT BREAKER TRIPPED. RE-SET, BUT NO HELP. GEAR FREE FALL FAILED TO LOCK ALL GEAR DOWN. RIGHT MAIN COLLAPSED UPON LANDING. FOUND B-NUT ON RIGID LINE BELOW HYDRAULIC POWER PACK LOOSE AND LEAKING HYDRAULIC FLUID. GEAR OPERATED NORMAL AFTER FIXING LEAK AND SERVICING RESERVOIR. (RESISTANCE WAS NOTED IN GEAR SYSTEM WHEN RECOVERY FROM RUNWAY UNTIL EMERGENCY EXTEND

PIPER SWITCH SHORTED 08/26/2000
PA38112 A002581 UNDER RT VNT 2000120700226
DURING LEVEL FLIGHT WITH NORMAL ELECTRICAL LOAD, ALTERNATOR INOP SWITCH INTERNALLY SHORTED. THE UNIT WAS SEALED. CAUSE IS MOST LIKELY THE AGE OF PART AND NORMAL DEGRADATION OF INTERNAL CIRCUITRY.

PIPER LYC BAFFLE MISALIGNED 08/16/2000 26
PA46350P TIO540AE2A LW13383 FWD VERT 2000120700008
ENGINE OIL QUICK DRAIN WOULD NOT SHUT OFF DUE TO ONE SHEARED OFF RIVET HEAD, MS 20470-4, BLOCKING HOLE IN DRAIN VALVE. REF LYC SB 489A. OIL SUMP BAFFLE ASSY HAD THE VERTICAL DEFLECTOR FLANGE MISALIGNED TO BAFFLE PLATE AND THE TENSION LOAD POPPED THE RIVET HEAD OFF. RIVET LOCATED AT AFT END OF FORWARD VERTICAL DEFLECTOR. (X)

PIPER	LYC	COLLAR	WRONG PART	08/01/2000	
PA60600	IO540K1J5	450052001	LANDING GEAR STE		

2000120100116
(AUS) NOSE LANDING GEAR STEERING COLLAR FAILED AT ACTUATOR ATTACHMENT POINT. CONNECTING BOLT WAS INCORRECT PART. BOLTSHEARED. UNAPPROVED PART. (X)

RAYTHN		BOLT	BROKEN	11/14/2000	8225
200BEECH		NAS464P4A23	RT ELEV HINGE	2000120500185	

RIGHT ELEVATOR CENTER HINGE BOLT WAS FOUND BROKEN DURING A ROUTINE AIRCRAFT INSPECTION. IT LOOKED INTACT, BUT UPON A TORQUE CHECK, IT WAS FOUND THAT THE BOLT WAS BROKEN. THERE IS NO HISTORY OF UNUSUAL STRESSES ON THIS PART. (X)

RAYTHN	PWA	FITTING	LOOSE	08/27/2000	
200BEECH	PT6A41		CONTROL SURFACE		

2000120800153
(AUS) RIGHT AILERON FOULING ON UPPER WING SKIN PREVENTING FULL AILERON MOVEMENT. FURTHER INVESTIGATION FOUND THAT THE INBOARD HINGE ATTACHMENT BRACKET WAS NOT SECURED. THE TWO LOWER ATTACHMENT SCREWS WERE INSTALLED BUT NOT SECURED TO THE ANCHOR NUTS. (X)

RAYTHN		RIVET	MISINSTALLED	04/20/2000	
58			LEFT	2000120800165	

AIRCRAFT REPAIRED IN 1980 AFTER GEAR UP LANDING. REPAIRS FOUND TO BE UNACCEPTABLE IN 2000 ANNUAL. RIVETS WERE INSTALLED WITH NO SHOP HEAD, AND RIVET HEADS NOT AGAINST STRUCTURE. LOCATION OF REPAIR IS UPPER FORWARD WING SPAR JUST OUTBOARD OF WING BELT FITTING. ANNUAL SIGNED OFF UNAIRWORTHY, AND OWNER FERRIED AIRCRAFT TO HOME BASE. OWNER SAYS HE CANNOT BELIEVE AIRCRAFT WENT THROUGH 18 ANNUALS AND NO ONE SAW THIS. SUBMITTER SUGGESTED EXTRA LOOK AT PREVIOUS REPAIRS.

RAYTHN		CABLE	FRAYED	08/21/2000	601
58		1068100111	LT MAIN GEAR	2000113000038	

FOUND LEFT MAIN GEAR DOWNLOCK CABLE FRAYED OVER 50 PERCENT THROUGH AT SWAGED TERMINAL ATTACHING TO LANDING GEAR ACTUATOR. NO EVIDENCE OF BEND OF OTHER DAMAGE TO CABLE. DAMAGE APPEARS TO HAVE OCCURRED DURING MANUFACTURE. INSTALLED AND RIGGED NEW CABLE ASSY. (X)

RAYTHN	CONT	BEECH	ROD	CRACKED	09/20/2000
58	IO520C		3682001115	L/G RETRACT	2000120100004

(AUS) NOSE LANDING GEAR RETRACTION ROD CRACKED IN TWO POSITIONS 180 DEGREES APART AND RUNNING LENGTHWISE FROM UNDER THE LOCKNUT. CRACK LENGTH 6.35 MM (0.25 INCH). ITEM WAS ALSO IDENTIFIED AS AN

RAYTHN	CONT	MCAULY	COUNTERWEIG	DEPARTED	09/08/2000
58	IO520CB		1D41701		2000120700010 828

DURING THE TAKEOFF ROLL, THE PILOT EXPERIENCED A SEVERE VIBRATION. THE PILOT ABORTED THE TAKEOFF AND SHUT DOWN THE ENGINES. AN INSPECTION OF THE AIRCRAFT REVEALED THAT A FEATHERING COUNTERWEIGHT ON THE LEFT PROPELLER HAD FAILED, DEPARTING THE AIRCRAFT AND DAMAGED THE SPINNER AND OPPOSITE BLADE. THE SEARCH FOR THE COUNTERWEIGHT IN THE SURROUNDING AREA HAS BEEN UNSUCCESSFUL. (X)

RAYTHN		NUT	MISSING	07/22/2000	
58P		MS20364624C	FREON COMP	2000113000033	

WHILE PERFORMING A VISUAL INSPECTION OF LEFT ENGINE, DISCOVERED THE FREON COMPRESSOR BRACKET ASSY MISSING THE NUT THAT RETAINS THE IDLER SHEAVE ARM RETAINING BOLT. THE SHEAVE ASSY WAS BEING HELD TO THE COMPRESSOR BRACKET BY BELT TENSION ONLY AND EVENTUALLY WOULD HAVE FAILED. BOLT THREADS WERE INSPECTED, A NEW WASHER AND NUT CALLED OUT FOR IN THE ENGINE PARTS CATALOG WERE INSTALLED AND TORQUED PER THE ENGINE O/M. (X)

RAYTHN	PWA	PWA	VANE	INACCURATE	07/07/2000
99	PT6A27		3032651	VANE T/E REPAIR	2000112900112 176

A TREND HAS DEVELOPED INDICATING PROCEDURES, TECHNIQUES, OR WORKMANSHIP OF OVERHAULED VANE RINGS IS RESULTING IN PREMATURE FAILURE OF PN 3032651 WHICH RESULTS IN UNSATISFACTORY ENGINE PERFORMANCE AND POSSIBLE ENGINE FAILURE. (X)

RAYTHN	PWA	BEECH	LINE	LEAKING	09/11/2000
99A	PT6A28	9938800213	1240084CR0190	1/2 FROM FITTING	2000120700018

(CAN) HYDRAULIC POWER PACK STARTED TO CYCLE FREQUENTLY AND THE HYDRAULIC LOW LIGHT CAME ON AND STAYED ON. HYDRAULIC CONTROL CIRCUIT BREAKER TRIPPED. PILOT RETURNED TO BASE AND DID A MANUAL EXTENSION AND LANDED AIRCRAFT WITH 3 GREEN. MAINTENANCE FOUND LINE GOING FROM MAINTENANCE VALVE TO POWER PACK GEAR UP SIDE TO BE LEAKING. LINE REPLACED AND CHECKED SERVICEABLE. (X)

RAYTHN		FLEX COUPLING	UNSERVICEABLE	06/23/2000	857
A36		1216346331	LT FLAP	2000112900015	

OWNER REPORTED FLAP SPLIT DURING FLIGHT. INSPECTION REVEALED LT FLAP FLEX CABLE DRIVE SPLINE CRIMP TO BE LOOSE WHICH ALLOWED CABLE CORE TO SLIP. LT FLAP DID NOT EXTEND AS MUCH AS RT FLAP. WHEN FLAPS WERE RETRACTED, LT FLAP CONTACTED UPLIMIT SWITCH; THUS, STOPPING FLAP RETRACTION. RT FLAP WAS STILL EXTENDED 15 DEGREES - 25 DEGREES CAUSING SPLIT. THIS APPEARED TO BE A MANUFACTURING DEFECT. SUBMITTER SUGGESTED RAYTHEON ISSUE AN EMERGENCY SB TO REQUIRE FIELD INSPECTIONS OFFLAP DRIVE SYSTEM. (X)

RAYTHN		STABILATOR	CRACKED	10/26/2000	2000
B24R		16962000165	AFT	2000111700108	

DURING INSPECTIONS OF UNDERSIDES OF STABILATORS ON BEECH SIERRAS, SUNDOWNERS, HAVE FOUND DEFECTS RANGING FROM WORKING RIVETS TO CRACKS IN LOWER SKINS. PROBLEM IS CENTERED APPROX 6 INCHES OUT FROM FUSELAGE ON BOTH SIDES. MECHANICS HAVE INSTALLED OVERSIZED RIVETS, ADDITIONAL RIVETS, PATCHES. BEECH ADDRESSES THIS PROBLEM IN SI 1167, OFFERS A P/N FOR IMPROVED AFT CENTER SPAR CALLING FOR NEW SPAR TO BE

BONDED TO SKINS. REPLACED AFT CENTER SPARS, AFT LOWER SKINS ON 2 SIERRAS, IN ONE, SPARS CRACKED WEAKENED BY 0.250 INCH CHERRY MAX RIVETS AND TRIPPLING OF RIVETS. ORIG SPAR DOES NOT OFFER ENOUGH SUPPORT TO CONTROL OIL CANNING EVEN THOUGH EXISTING SPAR MAY NOT BE CRACKED, WORKING, OR

REIMS	PWA	STRUT	FAILED	07/06/2000
F406	PT6A112	604201011	NOSE/TAIL LDNG	2000112200063

(AUS) NOSE LANDING GEAR OLEO OVER EXTENDED ALLOWING TORQUE LINKS TO INVERT. CAUSED BY OLEO UPPER BEARING LOOSENING FROM PISTON BARREL. (X)

REIMS	PWA	WIRE	MISINSTALLED	08/10/2000
F406	PT6A112		EXTINGUISHING SY	2000120100079

(AUS) NR 2 FIRE BOTTLE SQUIB WIRING INCORRECTLY WIRED TO THE BOTTLE ARM/FIRING SWITCH. SUBMITTER STATED THIS WOULD HAVE PREVENTED OPERATION OF THE FIRE BOTTLE. SUSPECT MANUFACTURING ERROR. (X)

RHNFLU		GRIP	DISLODGED	09/25/2000	28
EA300L		PC00423	BALL GRIP ELEV	2000120800157	

ELEVATOR TRIM BALL GRIP CAME OFF IN-FLIGHT. OWNER COMMENTED HE NOTICED RED MARKS ON HIS RIGHT PANTS LEG JUST ABOVE THE KNEE ON SEVERAL OCCASIONS. SUBMITTER SUGGESTED ALL EXTRA OWNERS CHECK THEIR TRIM KNOBS FOR LOOSENESS AS THIS IS A POTENTIALLY LIFE THREATENING DEFECT. (X)

ROBSIN	ROBSIN	RETAINER	CRACKED	08/17/2000
R22BETA		A1681	ENGINE/TRANS	2000112300059

(AUS) UPPER SHEAVE SEAL PLATE CRACKED. LIMITED INFORMATION PROVIDED. (X)

ROBSIN		BELT	STRETCHED	09/30/2000
R22BETA		A1902	ENGINE/TRANS	2000112900304

(AUS) ENGINE TO TRANSMISSION DRIVE BELTS WERE STRETCHED AFTER THIRTEEN HOURS OF OPERATION. BELTS DID NOT COME OFF PULLEYS. (X)

SKRSKY	GE	HOSE	LEAKING	09/27/2000
S61N	CT581401		HYDRAULIC HOSE	2000112300065

(CAN) WHILE IN-FLIGHT, PRIMARY HYDRAULIC PRESSURE DROPPED. AFTER LANDING, FOUND A HYDRAULIC PRESSURE HOSE FROM THE PUMP TO THE MANIFOLD HAD STARTED TO LEAK. HOSE WAS REPLACED AND LEAK CHECKED. AIRCRAFT RETURNED TO SERVICE. (X)

SKRSKY	TMECA	BEARING	CORRODED	10/26/2000
S76A	ARRIEL1S1	7610408500041	SWASHPLATE	2000113000285

(CAN) UPON PURCHASE AND DISASSEMBLY OF THIS HELICOPTER, THE SWASHPLATE BEARING SHOWED SIGNS OF CORROSION AND LACK OF GREASE. THE SWASHPLATE DRIVE LINK LUG ALSO SHOWED SIGNS OF CORROSION. (X)

SNIAS	TMECA	MAIN ROTOR	DELAMINATED	10/26/2000	718
AS350BA	ARRIEL1B	350A31000001	STARFLEX END	2000113000278	

(CAN) DELAMINATION DETECTED WITH REFERENCE TO EUROCOPTER AS350 MAINTENANCE WORK CARD 62.20.00.601 PARAGRAPH 4.3 (ILLUSTRATION FIGURE 5, DETAIL A, LOCATION ON PART AT DETAIL N). PENETRATION WITH A .010 INCH FEELER GAUGE TO A DEPTH OF APPROXIMATELY .75 INCH DETECTED BETWEEN ATTACHMENT BLOCK TO STARFLEX AND LAMINATED COMPONENT. TOLERANCE EXCEED PRESCRIBED LIMITS. (P=.45 INCH APPROXIMATELY, L=1.0 INCH APPROXIMATELY). PART HAS A 6,400 HOUR SERVICE LIFE LIMIT. DEFECT OCCURRED AT 718 HOURS IN

SOCATA	LYC	TANK	CRACKED	07/31/2000	17
TB21	TIO540AB1A	58B19497	AT WELD	2000111600078	

FOUND WELD AT TURBO BEND OF OIL DRAIN TANK CRACKED. UPON REMOVAL, TUBE CAME OUT OF TANK. LOOKING AT WELD, IT APPEARED TO BE A BAD WELD. SUBMITTER STATED THAT HAD THIS GONE UNDETECTED, IT COULD HAVE BEEN A DISASTER. (X)

SPARTN		TRUNNION	BROKEN	08/11/2000
7W			CASTING	2000111600070

LEFT LANDING GEAR DEPARTED UPON LANDING. STRUT ASSY BROKE FROM TRUNNION, LEFT WING TIP IMPACTED RUNWAY, DIRECTIONAL CONTROL LOST. POROUS CASTING, INADEQUATE. (X)

SWRNGN	GARRTT	O-RING	PINCHED	08/01/2000
SA226TC	TPE33110UA	PU304426	O-RING	2000112900171

(CAN) DURING CRUISE FLIGHT, A TOTAL HYDRAULIC FAILURE WAS ENCOUNTERED, AN EMERGENCY GEAR EXTENSION WAS PERFORMED AND THE AIRCRAFT LANDED WITHOUT INCIDENT. A SUBSEQUENT INSPECTION REVEALED THAT THE HYDRAULIC SYSTEM FLUID LEVEL WAS AT ZERO, CAUSED BY A LEAK AT THE OUTPUT FITTING PIN AN815-65 OF THE LT HYDRAULIC PUMP, FURTHER INSPECTION REVEALED THAT THE O-RING FOR THIS FITTING HAD BEEN PINCHED ON INSTALLATION OF THE HYDRAULIC PUMP THE PREVIOUS DAY. THE O-RING WAS REPLACED, THE HYDRAULIC SYSTEM SERVICED AND THE AIRCRAFT RETURNED TO SERVICE.

TMPSON	RYAN	BRACE	CRACKED	08/12/2000	4468
NAVIONB		1433316510	LMLG	2000113000030	

DURING ANNUAL INSPECTION, FOUND RIGHT AND LEFT MAIN GEAR RETRACT SIDE BRACE LINKS CRACKED AT WELD WHERE TUBE ATTACHES TO YOKE. ALL 3 LINKS (INCLUDING NOSE GEAR) WERE REPLACED WITH NEW DESIGN. STRONGER UNITS PURCHASED. (X)

UNIVAR	CONT	DORNEMARGLN	BATTERY	WRONG PART	08/16/2000
A2ALON	C9016F	DMELT6C	BS2173	BATTERY	2000120800143

(CAN) ELT WAS EQUIPPED WITH NON-APPROVED BATTERY MADE BY AVIAL PER B014 AIRWORTHINESS NOTICE. AVIAL BATTERY PACK IS ONLY APPROVED FOR DMELT 6 OR 8. (X)

WSK	FITTING	CORRODED	09/27/2000
M18A	D22200361	WING, FUSELAGE A	
2000112200068			
(AUS) LEFT OUTER WING BOTTOM ATTACHMENT FITTING PITTED. (X)			
WSK	FITTING	CORRODED	09/27/2000
M18A	D22200361	WING, FUSELAGE A	
2000112200069			
(AUS) RIGHT OUTER WING BOTTOM ATTACHMENT FITTING CRACKED AND PITTED. (X)			

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